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96th Congress }
2d Session } COMMITTEE PRINT

96-2

ANALYSIS OF HOME MORTGAGE DICLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

PREPARED FOR

FEDERAL HOME LOAN BANK BOARD

AND

FEDERAL DEPOSIT INSURANCE CORPORATION

PUBLISHED BY THE

COMMITTEE ON BANKING, HOUSING
AND URBAN AFFAIRS
UNITED STATES SENATE

JANUARY 1980

96th Congress }
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JANUARY 1980

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United States Senate

COMMITTEE ON BANKING, HOUSING, AND
URBAN AFFAIRS

WASHINGTON, D.C. 20510

January 1980

TO: All Members of the Committee on Banking, Housing
and Urban Affiars

I hereby transmit for the use of the Committee a Committee Print consisting of papers contracted for by the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation for a study of various aspects of the Home Mortgage Disclosure Act. This Committee Print should be of immediate use to the Committee and the general public in the context of hearings beginning next month on renewal of the Home Mortgage Disclosure Act.

The study grew out of a request from the Committee for compilation of Home Mortgage Disclosure Act data. Data was compiled for three SMSA's. Included in the Committee Print is a paper containing some analysis of the data by the staffs of the Bank Board and the FDIC.

Sincerely,
William Proxmire
Chairman

William Proxmire

CONTENTS

Page

Letter of Transmittal iii

Special Report on Residential Mortgage Lending in the Buffalo, Chicago and San Diego SMSA's, prepared by the staffs of the FDIC and the Federal Home Loan Bank Board 1

Executive Summary, Submitted by JRB Associates, Inc. 59

Reports Submitted by Resource Consultants, Inc.

Project Summary Report 97

Description of the Senate Banking Committee Report . . . 105

Recommendations for Changes to HMDA Reporting Regulations 121

Costs of Processing HMDA Statements on a Periodic Basis 141

Reports Submitted by JRB Associates, Inc.

Compliance Analysis 165

Completeness 247

Double Counting 409

Accuracy of Disclosure Statement Preparation 483

Methods to Improve Geocoding Accuracy 607

Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements 651

Revisions to Regulation C 701

Enforcement of the Home Mortgage Disclosure Act 759

Cost of Compiling Home Mortgage Disclosure Statements . . 813

Utility of the Home Mortgage Disclosure Act 849

SPECIAL REPORT ON RESIDENTIAL MORTGAGE LENDING IN BUFFALO, CHICAGO AND SAN DIEGO AREAS

This special report is in response to a request from the Senate Committee on Banking, Housing and Urban Affairs for a study showing the correlation of mortgage lending activity to the nature of various kinds of neighborhoods.

The staffs of the Federal Deposit Insurance Corporation and the Federal Home Loan Bank Board prepared this special report using data from a broader, two-year study conducted by JRB Associates, Inc., of McLean, Virginia, and Resource Consultants, Inc., of Phoenix, Arizona, and entitled "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas."

Resource Consultants, Inc. used U.S. census data to classify kinds of neighborhoods within each of three SMSAs - Buffalo, Chicago and San Diego - according to location and age of housing stock and the income and ethnic heritage of residents. Then RCI extracted mortgage lending statistics from the HMDA disclosure reports submitted to the FDIC and FHLBB and matched these figures with the neighborhood categories.

Both sources of data are imperfect: the U.S. census material because it dates from the 1970 decennial census and the HMDA disclosure reports (which are from 1977) because they reflect considerable error of content.

This submission consists of a table each for the Buffalo, Chicago and San Diego SMSAs presented in a format intended to conform to the guidelines of the committee's study request.

Each table shows number and amount of mortgage loans in 1977 for multifamily (five or more units) and one-to-four family structures in various kinds of neighborhoods as they were composed in 1970. The first two columns of figures in each table show housing existing in 1970; the remaining four columns show lending activity in 1977.

Neighborhood Classifications

Following are the method and criteria by which the census tracts in each of the three SMSAs are classified into kinds of neighborhoods according to location and age of housing stock and income and ethnic heritage of residents.

1. Location Within SMSA

Each census tract within the SMSA is first assigned to one of four location categories: Central City, Remainder of Urban Area, Balance of SMSA, and Not Classified.

BUFFALO SMSA

HMDA REPORTING SYSTEM 1977

NEIGHBORHOOD CATEGORY REPORT FOR SMSA 1280 BUFFALO, NY

REPORT HMD90J
PROGRAM HMD090

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN		NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY PROPERTIES NO. LOANS	1-4 FAMILY PROPERTIES AMT($000)
CENTRAL CITY - OLDER:							
LOWER INCOME:	MINORITY	2,824	12,222	2	10	346	1,390
	MIXED	4,132	27,824	2	603	1,585	10,301
	NON-MINORITY	9,915	33,283	35	760	1,700	15,690
MIDDLE INCOME:	MINORITY	11	1,954	0	0	100	934
	MIXED	0	0	0	0	0	0
	NON-MINORITY	4,596	68,616	14	390	6,709	71,941
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	0	0	0	0	0	0
* TOTAL - CENTRAL CITY - OLDER:		21,478	143,899	53	1,763	10,520	100,336
CENTRAL CITY - NEWER:							
LOWER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	14	16	0	0	0	0
MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	55	18	0	0	0	0
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	0	0	0	0	0	0
* TOTAL - CENTRAL CITY - NEWER:		669	34	0	0	0	0
** TOTAL - CENTRAL CITY:		22,147	143,933	53	1,763	10,520	100,336
BALANCE OF URBAN AREA - OLDER:							
LOWER INCOME:	MINORITY	146	917	0	0	3	14
	MIXED	412	1,238	1	13	16	383
	NON-MINORITY	1,556	6,252	0	0	85	1,135
MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	350	2,234	0	0	85	682
	NON-MINORITY	4,014	57,950	7	151	5,844	85,142
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	1,211	12,726	3	244	1,593	33,473
* TOTAL - BAL URBAN AREA - OLDER:		7,689	81,317	11	400	7,626	120,029

--more--

BUFFALO SMSA (Cont'd)

HMDA REPORTING SYSTEM 1977
NEIGHBORHOOD CATEGORY REPORT FOR SMSA 1280 BUFFALO, NY

REPORT HMD90J
PROGRAM HMD090

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN			NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY PROPERTIES NO. LOANS	1-4 FAMILY PROPERTIES AMT($000)
BALANCE OF URBAN AREA - NEWER:								
	LOWER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	40	2,628	0	0	277	3,894
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	1,681	33,542	1	196	3,502	45,406
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	2,656	51,556	20	2,677	6,972	118,925
* TOTAL - BAL URBAN AREA - NEWER:			4,377	87,726	21	2,873	10,751	168,225
** TOTAL - BALANCE OF URBAN AREA:			12,066	169,043	32	3,281	18,377	289,054
BALANCE OF THE SMSA:								
	LOWER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	0	0	0	0	0	0
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	703	43,002	1	1	2,156	40,864
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	869	30,341	6	2,852	3,326	76,419
* TOTAL - BALANCE OF THE SMSA:			1,572	73,343	7	2,853	5,482	117,283
* TOTAL - OUTSIDE OF THE SMSA:			--- NOT APPLICABLE ---		1,424	89,336	4,037	152,207
* TOTAL - NOT CLASSIFIED:			605	7,275	0	0	538	13,714
*** GRAND TOTALS ***			36,390	393,594	1,516	97,233	38,954	672,594

[illegible]

[illegible]

[illegible]

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CENTRAL CITY - [illegible]:						
LOWER INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIDDLE INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPPER INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
* TOTAL - CENTRAL CITY - [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CENTRAL CITY - NEWARK:						
LOWER INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIDDLE INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPPER INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
* TOTAL - CENTRAL CITY - NEWARK	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
** TOTAL - CENTRAL CITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BALANCE OF URBAN AREA - [illegible]:						
LOWER INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIDDLE INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
UPPER INCOME: MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MIXED	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
NON-MINORITY	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
* TOTAL - BAL URBAN AREA - [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

CHICAGO SMSA (Cont'd)

HMDA REPORTING SYSTEM 1977
NEIGHBURHOOD CATEGORY REPORT FOR SMSA 1600 CHICAGO, IL

REPORT HMD90J
PROGRAM HMD890

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN		NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY PROPERTIES NO. LOANS	1-4 FAMILY PROPERTIES AMT($000)
BALANCE OF URBAN AREA - NEWER:							
LOWER INCOME:	MINORITY	96	1,972	0	0	14	300
	MIXED	0	0	0	0	0	0
	NON-MINORITY	1,132	2,822	0	0	136	5,772
MIDDLE INCOME:	MINORITY	0	1,029	0	0	10	395
	MIXED	1,443	12,411	2	120	255	5,668
	NON-MINORITY	28,235	88,042	321	35,660	6,226	201,858
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	343	4,890	14	1,439	386	15,572
	NON-MINORITY	51,689	331,378	1,245	109,725	35,799	1,384,815
* TOTAL - BAL URBAN AREA - NEWER:		82,940	442,544	1,582	146,944	42,826	1,614,388
** TOTAL - BALANCE OF URBAN AREA:		137,185	653,344	2,041	191,463	55,548	2,848,542
BALANCE OF THE SMSA:							
LOWER INCOME:	MINORITY	84	153	1	320	10	297
	MIXED	0	0	0	0	0	0
	NON-MINORITY	0	359	0	0	51	4,678
MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	141	5,088	13	1,538	292	7,949
	NON-MINORITY	3,876	78,429	133	11,291	18,081	347,307
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	9,255	97,535	729	42,558	20,099	844,541
* TOTAL - BALANCE OF THE SMSA:		13,356	181,624	876	55,707	30,533	1,204,852
* TOTAL - OUTSIDE OF THE SMSA:		--- NOT APPLICABLE ---		64	11,264	10,750	417,555
* TOTAL - NOT CLASSIFIED:		2,703	26,020	340	20,297	22,616	611,863
*** G R A N D T O T A L S ***		658,736	1,614,391	5,854	457,653	150,145	5,365,963

SAN DIEGO SMSA
HMDA REPORTING SYSTEM 1977
NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320 SAN DIEGO, CA

REPORT HMD90J
PROGRAM HMD090

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN			NO. OF HOUSING UNITS		MULTI-FAMILY PROPERTY		1-4 FAMILY PROPERTIES	
			MULTI-FAMILY	1-4 FAMILY	NO. LOANS	AMT($000)	NO. LOANS	AMT($000)
CENTRAL CITY - OLDER:								
	LOWER INCOME:	MINORITY	367	4,731	17	1,428	83	2,096
		MIXED	6,095	6,270	69	8,988	217	7,187
		NON-MINORITY	2,793	975	14	2,514	24	1,390
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	3,163	13,082	118	15,463	541	21,425
		NON-MINORITY	8,165	18,853	191	25,951	1,038	56,701
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	254	3,016	18	994	196	8,508
		NON-MINORITY	58	4,464	9	1,237	366	21,308
* TOTAL - CENTRAL CITY - OLDER:			20,895	51,391	436	56,575	2,465	118,615
CENTRAL CITY - NEWER:								
	LOWER INCOME:	MINORITY	196	1,745	5	506	55	1,342
		MIXED	0	0	0	0	0	0
		NON-MINORITY	6,031	9,917	115	18,125	1,217	59,487
	MIDDLE INCOME:	MINORITY	420	1,788	8	1,283	53	1,396
		MIXED	2,018	12,481	51	5,600	641	27,999
		NON-MINORITY	13,884	23,806	322	63,806	1,670	84,546
	UPPER INCOME:	MINORITY	0	1,900	0	0	71	2,208
		MIXED	3,072	24,942	22	15,283	3,010	160,275
		NON-MINORITY	9,918	70,388	94	61,552	12,000	671,620
* TOTAL - CENTRAL CITY - NEWER:			35,539	146,967	617	166,155	18,777	1,008,873
** TOTAL - CENTRAL CITY:			56,434	198,358	1,053	222,730	21,242	1,127,488
BALANCE OF URBAN AREA - OLDER:								
	LOWER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	994	2,306	7	592	97	3,412
		NON-MINORITY	0	0	0	0	0	0
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	650	3,506	32	8,154	127	5,553
		NON-MINORITY	338	1,585	5	515	104	6,050
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	959	4,427	17	4,706	316	18,302
* TOTAL - BAL URBAN AREA - OLDER:			2,941	11,824	61	13,967	644	33,317

--more--

SAN DIEGO SMSA (Cont'd)
HMDA REPORTING SYSTEM 1977
NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320 SAN DIEGO, CA

REPORT HMD90J
PROGRAM HMD890

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN			NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY PROPERTIES NO. LOANS	1-4 FAMILY PROPERTIES AMT($000)
BALANCE OF URBAN AREA - NEWER:								
	LOWER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	138	1,127	10	1,412	73	3,051
		NON-MINORITY	661	926	14	1,328	85	4,571
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	4,521	14,558	118	31,436	1,034	46,966
		NON-MINORITY	5,148	9,356	112	35,249	881	43,727
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	2,251	17,895	52	16,098	1,200	52,593
		NON-MINORITY	6,280	47,981	189	56,908	5,447	280,716
* TOTAL - BAL URBAN AREA - NEWER:			18,999	91,843	495	142,431	8,720	431,624
** TOTAL - BALANCE OF URBAN AREA:			21,940	103,667	556	156,398	9,364	404,941
BALANCE OF THE SMSA:								
	LOWER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	19	143	0	0	2	81
		NON-MINORITY	131	1,706	0	0	49	1,973
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	5	1,195	2	4,991	330	11,205
		NON-MINORITY	681	10,733	13	6,628	2,098	102,488
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	45	6,970	12	12,560	2,123	114,960
		NON-MINORITY	237	12,037	18	7,617	3,639	194,628
* TOTAL - BALANCE OF THE SMSA:			1,118	32,784	45	31,796	8,241	425,335
* TOTAL - OUTSIDE OF THE SMSA:			--- NOT APPLICABLE ---		2,635	242,099	16,068	893,984
* TOTAL - NOT CLASSIFIED:			1,243	11,978	54	14,657	2,658	149,241
*** G R A N D T O T A L S ***			80,735	346,787	4,343	667,600	57,573	3,060,989

- Central City—the contiguous census tracts which comprise the core city (i.e., city for which the SMSA is named) of the SMSA as defined by the Bureau of the Census. For Buffalo and San Diego, this area corresponds to the census tracts contained (wholly or partially) within the corporate limits of the aforementioned cities; for the Chicago SMSA, this area is somewhat more extensive than the corporate limits of the city of Chicago. The Central City tracts included in this category for the HMDA Study Project were furnished by the Department of Housing and Urban Development.

- Remainder of Urban Area—all census tracts (not necessarily contiguous) within the SMSA that are not contained in the Central City and which have a housing density of 400 or more units per square mile. Assuming slightly more than three persons per household, this approximates the 1,000 persons per square mile definition used by the Bureau of the Census.

- Balance of SMSA—all census tracts not included in the Central City lists furnished by the FHLBB and for which both housing unit and tract area data were available.

2. Age of Housing Stock

Census tracts assigned to one of the first two location groups are further classified according to median age of housing stock, as obtained from 1970 census data. The following categories are used:

- Older—A census tract where the median construction date of the housing stock is 1949 or before (i.e., the median age of the housing stock was 28 years or older in 1977).

- Newer Neighborhood—A census tract where the median age of the housing stock was 27 years or less in 1977.

3. Income of Residents

The appropriate census tract subdivisions are again categorized according to the income of residents. The median income for families and unrelated individuals was computed for each tract using 1970 census data. The median income for each tract was then compared to that of the entire SMSA, and the tracts were classified as follows:

- Lower Income—tracts where the median income is less than 80% of the SMSA median income.

- Middle Income—tracts where the median income is 80% to 120% of the SMSA median income.

- Upper Income—tracts whose median income exceeds 120% of the SMSA median income.

4. Ethnic Composition of Census Tracts

Finally, census tracts are categorized according to ethnic composition. This category counts as minorities only Black and Spanish American heads of household of either sex as reported in the 1970 census. Each tract was classified according to its percentage of minority heads of household, as follows:

- Minority—greater than 75% minority heads of household.
- Mixed—more than 10% but less than 75% minority heads of household.
- Non-Minority—less than 10% minority heads of household.

5. Outside of SMSA

The HMDA statement format suggested in Federal Reserve Board Regulation C provides a space for the total mortgages made outside the relevant SMSA. The Senate Banking Committee Report format includes these data where available as "Total - Outside of SMSA."

Data Sources and Limitations

The data used to compile these tables were obtained from two sources: 1977 HMDA statements supplied by subject banks and S&Ls operating one or more offices within one of the three study SMSAs and the Fourth Count 1970 Census of Population and Housing.

The Bureau of the Census statistics represent the most recent, official, accurate and complete demographic data, but they describe the individual census tracts as they existed in 1970, whereas the HMDA data describe mortgage flows as they existed in 1977. Any distortion caused by analyzing 1977 flows in terms of 1970 attributes may be minimized when dealing with a relatively stable area (e.g., Buffalo), but could lead to erroneous conclusions in rapidly changing areas (e.g., portions of Chicago) or rapidly growing areas (e.g., San Diego).

Of more concern, however, is the quality of the HMDA data and the coverage of subject institutions within the three study SMSAs. Overall, 76 percent of the covered banks and S&Ls operating in the study areas submitted reports in usable form; even on these, however, 10 percent of the loans could not be assigned to the appropriate census tract. These are carried in the "Total-Not Classified" item in the tables for each SMSA.

With respect to the HMDA data that were tabulated, the HMDA Study portion devoted to an assessment of accuracy concluded that geocoding errors (i.e., assignment of an incorrect census tract identifier to a property address) coupled with classification errors (i.e., inappropriate inclusion or exclusion of loans according to Regulation C criteria and other errors resulting in incorrect categorization of loan type or census tract) could introduce as high as a 5 percent error rate into the reported figures.

These other caveats should also be borne in mind:

- This study is predicated upon the validity of using the number of structures as a surrogate for the demand for mortgage credit.
- Lenders not subject to HMDA were also active in the mortgage markets in the three study SMSAs. The HMDA Study findings indicate that the proportion of mortgage loans originated by non-HMDA lenders in the central county of the study SMSAs ranged from a high of 37.5 percent (San Diego) to a low of 12.1 percent (Cook County)

BUFFALO

Population

The Buffalo SMSA is composed of Erie and Niagara Counties in northwestern New York State. The area had an overall population of 1,349,000 in 1970, which reflects a 3.2 percent increase since 1960. The year-end 1977 population was estimated at 1,313,000. The City of Buffalo had 463,000 persons in 1970, but had declined to an estimated 396,000 in 1977. The city's population had climbed from 507,000 in 1920 to a high of 580,000 by 1950, but the next two ten-year intervals registered declines of 8.2 percent and 13.1 percent, respectively. The most recent estimate evidences a decline of nearly one-third from the 1950 figure. While these population decreases in the city were at least partially offset by gains in other portions of the SMSA, the area can only be characterized in recent years as being stable, at best, with limited periods of modest growth outside the city.

Income

The median household income in the SMSA was reported as $15,229 in 1977, slightly below the statewide median of $15,305; in the City of Buffalo alone, the comparable figure was $11,857, or 77.5 percent of the statewide median. This represents a substantial decline from 1965, when the city's median income was 85.7 percent of the New York median. Other areas of the SMSA have fared better during that twelve year period, with the result that the SMSA's median income rose from 96.5 percent of the statewide median in 1965 to 99.5 percent in 1977. These income figures are consistent with population trends cited above, where declines in the city of Buffalo were largely offset by gains in other portions of the SMSA.

Retail Sales

Retail sales in the Buffalo area from 1965 to 1977 show a stability which might be somewhat surprising given the population and income trends. Sales in Buffalo were 36.5 percent of the SMSA's total in 1965, and this ratio declined only slightly to 33.5 percent in 1977. The SMSA's retail sales were 6.3 percent of the State total in 1965, but grew to 7.1 percent of the New York figure in 1977.

Commutation

Of the 209,000 people working in Buffalo in 1970, 53.7 percent resided in Buffalo, 42.2 percent resided elsewhere in Erie County and 2.4 percent resided in Niagara County. Of the workers living in Buffalo, 68.4 percent worked in Buffalo; 36.3 percent of the workers living in other parts of Erie County commuted to Buffalo; and 5.9 percent of Niagara County's resident workers commuted to Buffalo.

Financial Institution Structure

At year-end 1977, there were 138 offices of five mutual savings banks located in the Buffalo SMSA. At mid-year 1977 these offices held IPC deposits of $4.4 billion, of which Buffalo Savings Bank had the largest share (42.8 percent). The top two savings banks had a 76.6 percent market share.

At this time, there were also 227 offices of thirteen commercial banks. The three largest banks held 87.7 percent of the $2.6 billion in local IPC deposits.

As of March 31, 1978 there were six savings and loan associations operating a total of twenty-two offices in the Buffalo area. These offices had deposits of $323 million, of which 42.1 percent was held by the largest institution and 75.9 percent was held by the three largest.

Housing Stock

Based on 1970 Census data, the Buffalo SMSA contained an estimated 303,989 one-to-four family dwelling structures. Of those, 29.6 percent were located in the central city, 47.2 percent were located in the urbanized area outside of Buffalo proper, and the remainder were located in the balance of the SMSA (Table 1).

Within the city of Buffalo, 47 percent of the 1-4 family dwelling structures were in census tracts classified as lower income. Fifty-three percent of the 1-4 family structures, in turn, were in middle-income tracts. No 1-4 family dwelling structures were located in tracts classified as upper income. In terms of race of head of household, as reported in the 1970 Census, 9 percent of the 1-4 family structures were located in minority census tracts, 18.4 percent were in mixed tracts, and 72.6 percent were located in non-minority census tracts.

Of the 143,273 estimated 1-4 family dwelling structures located in the urbanized area surrounding the city of Buffalo, 44 percent were located in census tracts in which the median age of the housing stock in 1977 was 28 years or more. Almost 90 percent of the 1-4 family structures in the older urbanized area were located in non-minority, middle- and upper- income census tracts. With respect to the 1-4 structures in urbanized areas where the median age of the housing stock was 27 years or less, all of the structures were located in non-minority census tracts.

As regards the 1-4 family structures in the balance of the SMSA, 59.2 percent were located in non-minority, middle-income census tracts. The remaining 40.8 percent were located in non-minority, upper-income census tracts.

More than three-fourths of the total estimated 1-4 dwelling structures in the Buffalo SMSA were single-family residences; 19.1 percent were two-family dwellings; and 3.6 percent were structures housing 3-to-4 families each. Of the 303,989 one-to-four family structures in the SMSA, 84.8 percent were owner-occupied. All but 3.3 percent of the owner-occupied structures were owned by non-minorities.

The Buffalo SMSA contained an estimated 422,104 total housing units. Of those units, 35,785, or 8.5 percent, were classified as multi-family. In terms of geographic breakdown, 61.9 percent of the multi-family units were located in Buffalo proper, 33.7 percent were in the urbanized area surrounding the city, and 4.4 percent were located in the balance of the SMSA. Lower-income census tracts contained 53.2 percent of the multi-family units, middle-income tracts contained 33.6 percent, and upper-income tracts contained 13.2 percent. As regards distribution by race of head of household, 8.3 percent of the multi-family units were in minority census tracts, 13.7 percent were in mixed census tracts, and 78 percent were in census tracts classified as non-minority.

Aggregate HMDA Loan Flows

Table 2 summarizes the percentage distribution of 1977 HMDA loan flows for the Buffalo SMSA. Additional loan flow breakdowns are presented in Tables 3 and 4.

Geographic Distribution

The geographic patterns of mortgage lending for 1-4 family structures in the Buffalo SMSA in 1977 generally mirrored the geographic distribution of 1-4 family dwelling structures. The central city portion of the SMSA, for example, contained 29.6 percent of the 1-4 dwelling structures and received 30.6 percent of the total number of residential loans granted in 1977. Similarly, the older, urbanized area outside of Buffalo contained 20.8 percent of the 1-4 dwelling structures in the SMSA and received 22.2 percent of the total number of residential loans. The slight geographic bias evident in favor of residential loans made to newer, urbanized areas occurred at the expense of the nonurbanized portion of the SMSA rather than the central city.

The average size of the residential loans made in the SMSA showed considerable variation among the various census tract categories. For example, the average residential loan made in central city census tracts classified as older, lower income, minority in 1977 was $4,017. The comparable figure for older, middle income, non-minority tracts was $10,723. Average loan sizes in tracts located elsewhere in the SMSA showed similar variation. With respect to the urbanized area outside of the central city, for example, average residential loan size in tracts classified as older, lower income, minority was $4,667, whereas the average size in tracts classified as upper income, non-minority was $21,013.

In terms of percentage distribution of home improvement loans made in the Buffalo SMSA in 1977, survey participants favored the central city, largely at the expense of the older, other-urbanized areas in the SMSA. Of the total 4,971 home improvement loans made in 1977, 45.5 percent went to central city census tracts. Tracts in the older, urbanized area outside of Buffalo, on the other hand, received only 14.6 percent of the home improvement loans made.

It is interesting to note that the average size of the improvement loans made in the SMSA showed remarkable consistency. For example, within the central city, the average size of such loans ranged from $2,979 (middle-income, minority census tracts) to $3,242 (middle-income, non-minority census tracts). In the newer, urbanized area surrounding the central city, average home improvement loan size ranged from $3,140 (middle-income, non-minority census tracts) to $3,203 (upper-income, non-minority census tracts). The average for the SMSA overall was $3,303.

[illegible] lending [illegible] for multi-family mortgages in the Buffalo [illegible] generally [illegible] the geographic distribution of multi-family [illegible] shown in Table 1. [illegible] percent of the total number of multi-family [illegible] loans made in [illegible] were [illegible] on properties located in the central [illegible] percent of the multi-family units in the [illegible]

The percentage of multi-family mortgage loans written on units located [illegible] tracts in the [illegible] area surrounding Buffalo and the balance of [illegible] SMSA also [illegible] closely with the percentage of multi-family units [illegible] in these areas.

In addition to the foregoing, survey [illegible] in the Buffalo SMSA [illegible] 6,388 loans totaling [illegible] million on 1-4 family properties located out-[illegible] of the SMSA. They also made [illegible] multi-occupancy loans totaling $[illegible]llion outside of the SMSA. It is not possible to ascertain from the data [illegible] the properties located outside of the SMSA were in-state or out-of-[illegible]

The column labeled non-occupant loans in Table 1 refers to mortgage loans [illegible] home improvement and residential mortgage loans, except on multi-family [illegible]ildings, made to borrowers who did not intend to reside in the property securing the residential mortgage loan or, in the case of home improvement loans, the property to be improved, as specified in Regulation C. Given that the precise mix between mortgage loans and home improvement loans is not known, it is not possible to draw any meaningful conclusions regarding the percentage distribution of non-occupant loans by various categories.

Income Distribution

The distribution of the various loans reported on HMDA statements by income level categories for lending institutions in the Buffalo SMSA is shown in Table 2. With respect to 1-4 family residential loans, the results largely mirror the distribution by income categories of 1-4 family structures. This finding does not hold, however, in the case of multi-family mortgages.

As regards 1-4 family residential loans, lower income census tracts received 11.7 percent of the total number of such loans. While this percentage might appear to be low relative to the numbers presented for middle- and upper-income census tracts, it should be kept in mind that less than 10 percent of the single-family dwellings in the Buffalo SMSA overall were located in lower-income census tracts. This percentage takes on added significance given that over three-fourths of the total number of 1-4 structures in the entire Buffalo SMSA were single-family dwellings.

Multi-family mortgage loan flows, on the other hand, did not correspond to the distribution of multi-family units among the three census tract income categories. Both the lower-income and middle-income census tracts received a smaller percentage number of multi-family mortgage loans relative to the percentage of multi-family units contained therein. Upper-income census tracts, in contrast, received a disproportionately larger share of multi-family mortgage loans relative to the percentage of such units in those tracts. Whereas only 13.2 percent of the multi-family units were located in upper-income census tracts, those tracts received 31.5 percent of the multi-family loans in the SMSA.

Head of Household Racial Composition Distribution

Census tracts classified as non-minority generally received over 90 percent of the total number and total dollar amount of the loans shown in Table 2. The sole exception was in the category of home improvement loans. Two factors may help to explain the disproportionate share of loan flows to households headed by non-minorities. First, single-family dwellings, the bulk of Buffalo's housing stock, were principally located in non-minority census tracts as of 1970. Secondly, minority-headed households as of the 1970 Census owned only 3.3 percent of the owner-occupied 1-4 family structures in the SMSA overall.

Mortgage Flows to Neighborhood-Types

Table 4 summarizes the housing stock and loan flows within the Buffalo SMSA by neighborhood-types. In order to identify loan flow trends to specific neighborhood-types, ratios relating number of loans to number of structures (or multi-family units, in the case of multi-family mortgages) were computed for each of the neighborhood-types in the SMSA. The findings are discussed below. In the analysis which follows, geographic location is held constant, both with respect to housing stock and loan flows.

With respect to 1-4 family residential loan flows to older census tracts in Buffalo proper, an analysis of the data revealed a lending bias in favor of middle-income, minority neighborhoods. Whereas the loan-to-structure ratio for that neighborhood-type was .150, the comparable ratio for other neighborhood-types ranged from .050 (lower-income, minority) to .144 (middle-income, non-minority). As regards multi-family loan flows to older census tracts in the central city, lower-income, non-minority neighborhoods were favored over other neighborhood-types.

With respect to loan flows (both 1-4 family and multi-family mortgages) to census tracts in the urbanized area surrounding Buffalo and the remainder of the SMSA, upper-income, non-minority neighborhoods were favored over all other neighborhood-types.

Conclusion

The bulk of the housing stock in the Buffalo SMSA in 1970 consisted of single-family dwellings located in middle- and upper-income census tracts outside of the central city. Based on the demographic and HMDA loan data examined, several aggregate trends emerged. First and foremost, the geographic pattern of residential and multi-family mortgage lending in 1977 generally mirrored the geographic distribution of 1-4 family dwelling structures and multi-family units in the SMSA. Second, the distribution of 1-4 family mortgage loans by income level categories generally reflected the geographic distribution of the housing stock located in the specific income categories. Third, with the exception of home improvement loans, non-minority census tracts received over 90 percent of the total number and dollar amount of the HMDA loan flows in the Buffalo SMSA in 1977.

In addition to the general results cited above, loan flows to specific neighborhood-types were examined. With respect to 1-4 family residential loan flows to older census tracts in Buffalo proper, middle-income, minority neighborhoods were favored over other neighborhood-types. Lower-income, non-minority neighborhoods, on the other hand, were favored as regards multi-family mortgage loan flows to older census tracts in Buffalo. An analysis of the data for tracts outside of the central city revealed a lending bias in favor of upper-income, non-minority neighborhoods, both with respect to 1-4 family and multi-family mortgage loans.

TABLE 1

Percentage of Distribution of Estimated Dwelling Structures
Buffalo SMSA, 1970

			One-to-four Family Structures							
Central City-Older	# Multi-Family Units	% Total	# Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Lower Income-Minority	2,824	7.9	2,720	1.2	3,397	5.8	776	7.0	6,893	2.3
Mixed	4,132	11.6	7,322	3.1	7,861	13.5	1,366	12.3	16,549	5.4
Non-minority	9,915	27.7	7,804	3.3	8,521	14.6	2,418	21.8	18,743	6.2
Middle Income-Minority	11	—	504	0.2	662	1.1	36	0.3	1,202	0.4
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	4,596	12.8	26,747	11.4	18,043	31.0	1,662	15.0	46,452	15.3
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—
Sub-totals	(21,478)	(60.0)	(45,097)	(19.2)	(38,484)	(66.0)	(6,258)	(56.4)	(89,839)	(29.6)
Central City-Newer										
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	14	—	—	—	8	—	—	—	8	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	635	1.8	6	—	—	—	3	—	9	—
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—
Sub-totals	(669)	(1.9)	(6)	(—)	(8)	(—)	(3)	(—)	(17)	(—)
Balance of Urban Area-Older										
Lower Income-Minority	146	0.4	450	0.2	101	0.2	77	0.7	628	0.2
Mixed	412	1.1	388	0.2	160	0.3	151	1.4	699	0.2
Non-minority	1,556	4.4	2,477	1.1	1,131	1.9	434	3.9	4,042	1.3
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	350	1.0	1,299	0.6	269	0.5	116	1.0	1,684	0.6
Non-minority	4,014	11.2	34,612	14.7	8,560	14.7	1,907	17.2	45,079	14.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	1,211	3.4	10,309	4.4	762	1.3	256	2.3	11,327	3.7
Sub-totals	(7,689)	(21.5)	(49.535)	(21.2)	(10,983)	(18.9)	(2,941)	(26.5)	(63,459)	(20.8)

	# Multi-Family Units	% Total	One-to-four Family Structures							
			# Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Balance of Urban Area-Newer										
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	40	0.1	1,683	0.7	282	0.5	145	1.3	2,110	0.7
Middle Income - Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	1,681	4.7	26,502	11.3	2,461	4.2	741	6.7	29,704	9.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	2,656	7.4	44,958	19.2	2,511	4.3	531	4.8	48,000	15.8
Sub-totals	(4,377)	(12.2)	(73,143)	(31.2)	(5,254)	(9.0)	(1,417)	(12.8)	(79,814)	(26.3)
Balance of SMSA										
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	703	2.0	39,638	16.9	1,994	3.4	285	2.6	41,917	13.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	869	2.4	27,299	11.6	1,453	2.5	191	1.7	28,943	9.5
Sub-totals	(1,572)	(4.4)	(66,937)	(28.5)	(3,447)	(5.9)	(476)	(4.3)	(70,860)	(23.3)
Grand Totals[1]	35,785	(100.0)	234,718	(100.0)	58,176	(100.0)	11,095	(100.0)	303,989	(100.0)

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[1] Detail may not equal 100 percent due to rounding technique.

TABLE 8

Summary of 1977 HMDA Loan Flows
Buffalo SMSA
Percentage Distribution of Loans by Major Categories

Categories	FHA, FmHA, VA # Loans (%)	FHA, FmHA, VA Amount (%)	Other Residential # Loans (%)	Other Residential Amount (%)	Total Residential # Loans (%)	Total Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi-Family # Loans (%)	Total Mortgages Multi-Family Amount (%)	Non-Occupant Loans # Loans (%)	Non-Occupant Loans Amount (%)
Geographic												
Central City	43.5	37.8	22.0	13.4	30.6	19.8	43.3	43.8	57.6	38.3	[illegible]	[illegible]
Urban Area-Older	19.0	20.6	24.6	25.7	22.2	23.8	14.6	14.2	11.0	5.2	[illegible]	[illegible]
Urban Area-Newer	29.3	31.3	32.5	33.0	31.3	33.2	23.4	22.5	23.0	36.4	[illegible]	[illegible]
Balance Urban	(48.3)	(51.9)	(57.1)	(59.3)	(53.5)	(57.0)	(38.0)	(36.7)	(34.0)	(41.6)	[illegible]	[illegible]
Balance SMSA	8.2	10.3	20.8	27.2	16.0	23.2	16.3	19.6	7.6	20.1	[illegible]	[illegible]
Totals[1]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Income Level												
Lower Income	17.6	12.6	7.7	4.2	11.7	8.3	24.3	23.2	43.3	17.6	20.4	11.7
Middle Income	57.8	58.6	51.2	45.1	53.7	48.4	50.3	50.9	25.0	9.4	30.3	61.1
Upper Income	24.6	28.8	41.1	50.7	34.6	43.2	25.0	25.9	31.3	73.1	50.1	27.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Head of Household Racial Composition												
Minority	2.5	1.1	1.0	0.2	1.3	0.3	6.8	6.3	2.0	0.9	[illegible]	[illegible]
Mixed	9.2	6.5	2.0	0.8	4.9	2.3	10.9	9.9	3.3	7.0	[illegible]	[illegible]
Non-minority	88.3	92.4	97.1	99.0	93.8	97.3	82.4	83.8	94.6	92.1	[illegible]	[illegible]
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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[1] Detail may not equal 100 percent due to rounding technique.

TABLE 3

1977 HMDA Mortgage Flows
Buffalo SMSA

Location of Property Secured by Mortgage Loan	FHA, FMHA, VA # Loans (%)	FHA, FMHA, VA Amount (%)	Other Residential # Loans (%)	Other Residential Amount (%)	Total Residential # Loans (%)	Total Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi-family # Loans (%)	Total Mortgages Multi-family Amount (%)	Non-occupant Loans # Loans (%)	Non-occupant Loans Amount (%)
Central City-Older												
Lower Income-Minority	1.6	0.7	0.6	0.1	1.0	0.3	4.7	4.5	2.2	0.1	—	—
Mixed	8.8	6.2	1.8	0.6	4.6	2.0	10.7	9.7	2.2	7.6	1.2	0.3
Non-minority	6.0	4.4	4.2	2.5	4.9	3.1	7.9	7.9	38.0	9.6	19.3	10.4
Middle Income-Minority	0.9	0.5	0.3	0.1	0.5	0.2	1.9	1.7	—	—	0.6	0.2
Mixed	—[1]	—	—	—	—	—	—	—	—	—	—	—
Non-minority	26.1	26.0	15.2	10.1	19.5	14.2	20.3	19.9	15.2	4.9	6.8	2.6
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
[a]Total-Central City-Older	(43.5)	(37.8)	(22.0)	(13.4)	(30.5)	(19.8)	(45.5)	(43.8)	(57.6)	(22.3)	(28.0)	(13.5)
Central City-Newer	—	—	—	—	—	—	—	—	—	—	—	—
[aa]Total Central City	((43.5))	((37.8))	((22.0))	((13.4))	((30.5)	((19.8))	((45.5))	((43.8))	((57.6))	((22.3))	((28.0))	((13.5))
Balance of Urban Area-Older												
Lower Income-Minority	—	—	—	—	—	—	0.1	0.1	—	—	—	—
Mixed	—	0.1	—	0.1	—	0.1	—	—	1.1	0.2	—	—
Non-minority	0.3	0.4	0.2	0.2	0.2	0.2	0.7	0.6	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	0.3	0.2	0.2	0.1	0.2	0.1	0.2	0.2	—	—	0.6	0.4
Non-minority	15.7	16.9	18.1	17.3	17.0	16.8	11.0	10.3	7.6	1.9	18.0	37.3
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	2.6	3.1	6.1	8.0	4.6	6.6	2.6	3.0	3.3	3.1	8.1	10.8
[a]Total-Balance Urban Area-Older	(19.0)	(20.6)	(24.6)	(25.7)	(22.2)	(23.8)	(14.6)	(14.2)	(12.0)	(5.2)	(26.7)	(48.4)

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[1] Dashes indicate percentage was either nonexistent or less than 0.1.

TABLE 3 (Cont'd)

Location of Property Secured by Mortgage Loan	FHA, FmHA, VA # Loans (%)	FHA, FmHA, VA Amount (%)	Other Residential # Loans (%)	Other Residential Amount (%)	Total Residential # Loans (%)	Total Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi-family # Loans (%)	Total Mortgages Multi-family Amount (%)	Non-occupant Loans # Loans (%)	Non-occupant Loans Amount (%)
Balance of Urban Area-Newer												
Lower Income-Minority	—[1]	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	0.7	0.9	0.9	0.7	0.8	0.8	0.4	0.4	—	—	1.9	1.0
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	11.1	10.5	9.6	8.4	10.2	9.0	8.1	7.6	1.1	2.5	7.5	1.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	17.5	19.9	22.1	24.7	20.3	23.5	14.9	14.5	21.7	33.9	11.8	5.3
*Total-Balance of Urban Area-Newer	(29.3)	(31.3)	(32.5)	(33.8)	(31.3)	(33.2)	(23.4)	(22.5)	(22.8)	(36.4)	(21.1)	(8.2)
**Total-Balance of Urban Area	((48.3))	((51.9))	((57.1))	((59.5))	((53.5))	((57.0))	((38.0))	((36.7))	((34.8))	((41.6))	((47.8))	((56.7))
Balance of the Buffalo SMSA												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	3.7	4.5	7.9	9.2	6.3	8.1	9.1	11.1	1.1	—	5.0	18.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	4.5	5.8	12.9	18.0	9.7	15.1	7.4	8.4	6.5	36.1	19.3	11.0
**Total-Balance of the SMSA	((8.2))	((10.3))	((20.8))	((27.2))	((16.0))	((23.2))	((16.5))	((19.5))	((7.6))	((36.1))	((24.2))	((29.8))
***Grand totals[2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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[1] Dashes indicate percentage was either nonexistent or less than 0.1.

[2] Totals may not equal 100.0 in all cases due to rounding technique.

BUFFALO

	Residential (1-4 Family)				Residential Mortgages		Home Imp. Loans		Multi-family			
	Units Number	Units % Total	Structures Number	Structures % Total	# %	Amt. %	# %	Amt. %	Units Number	Units % Total	Loans # %	Loans Amt. %
Central City-Older												
Lower Income-Minority	12,222	3.2	6,893	2.3	1.0	0.3	4.7	4.5	2,824	7.9	2.2	0.1
Mixed	27,824	7.2	16,549	5.4	4.6	2.0	10.7	9.7	4,132	11.6	2.2	7.6
Non-minority	33,283	8.6	18,743	6.2	4.9	3.1	7.9	7.9	9.915	27.7	38.0	9.6
Middle Income-Minority	1,954	0.5	1,202	0.4	0.5	0.2	1.9	1.7	11	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	68,616	17.8	46,452	15.3	19.5	14.2	20.3	19.9	4,596	12.8	15.2	4.9
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Total-Central City-Older	143,899	37.3	89,839	29.6	30.5	19.8	45.5	43.8	21,478	68.0	57.6	22.3
Central City-Newer												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	16	—	8	—	—	—	—	—	14	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	18	—	9	—	—	—	—	—	655	1.8	—	—
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Total-Central City-Newer	34	—	17	—	—	—	—	—	669	1.9	—	—
Total Central City	143,933	37.3	89,856	29.6	30.5	19.8	45.5	43.8	22,147	61.9	57.6	22.3
Balance of Urban Area-Older												
Lower Income-Minority	917	0.2	628	0.2	—	—	0.1	0.1	146	0.4	—	—
Mixed	1,238	0.3	699	0.2	—	0.1	—	—	412	1.1	1.1	0.2
Non-minority	6,252	1.6	4,042	1.3	0.2	0.2	0.7	0.6	1,556	4.4	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	2,234	0.6	1,684	8.6	0.2	0.1	0.2	0.2	350	1.0	—	—
Non-minority	57,950	15.0	45,079	14.8	17.0	16.8	11.0	10.3	4,014	11.2	7.6	1.9
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	12,726	3.3	11,327	3.7	4.6	6.6	2.6	3.0	1,211	3.4	3.3	3.1
Total-Balance Urban Area-Older	81,317	21.1	63,459	20.8	22.2	23.8	14.6	14.2	7,689	21.5	12.0	5.2

TABLE 4 cont'd

BUFFALO

	Residential (1-4 Family)				Residential Mortgages		Home Imp. Loans		Multi-family			
	Units		Structures		#	Amt.	#	Amt.	Units		Loans	
	Number	% Total	Number	% Total	%	%	%	%	Number	% Total	# %	Amt. %
Balance of Urban Area-Newer												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	2,628	0.7	2,110	0.7	0.8	0.8	0.4	0.4	40	0.1	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	33,542	8.7	29,704	9.8	10.2	9.0	9.1	7.6	1,701	4.7	1.1	3.4
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	51,556	13.4	48,000	15.8	20.3	23.5	14.0	14.5	2,636	7.4	21.7	33.0
Total-Balance Urban Area-Newer	87,726	22.7	79,814	26.3	31.3	33.2	23.4	22.5	4,377	12.2	22.8	36.4
Total-Balance of Urban Area	169,043	43.8	143,273	47.1	53.5	57.0	38.0	36.7	12,066	33.7	34.8	41.6
Balance of the Buffalo SMSA												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	43,002	11.1	41,917	13.8	6.3	8.1	9.1	11.1	703	2.0	1.1	—
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	30,341	7.9	28,943	9.5	9.7	15.1	7.4	8.4	869	2.4	6.5	36.1
Total-Balance of the SMSA	73,343	19.0	70,860	23.3	16.0	23.2	16.5	19.5	1,572	4.4	7.6	36.1
Grand totals	386,319	100.0	303,989	100.0	100.0	100.0	100.0	100.0	35,785	100.0	100.0	100.0

CHICAGO

Population

The Chicago SMSA is composed of Cook, DuPage, Kane, Lake, McHenry and Will Counties. In 1970, its population was 6,979,000, which shows a 12.2 percent increase over 1960. The City of Chicago had a 1970 population of 3,367,000, having declined 5.2 percent in the preceding ten years. By the end of 1977, the population of the SMSA was estimated at 7,022,000 and that of the city at 3,045,000. In 1930, Chicago had 3,376,000 persons, or about the same figure recorded in 1970, but by 1977 the seven-year decline was estimated to be 10.6 percent. With rapid growth in portions of the SMSA outside Chicago (35.3 percent from 1960 to 1970), the SMSA's overall growth rate is slightly ahead of that of Illinois as a whole.

Income

In the SMSA, median household income was $19,468 in 1977; the comparable figure for the city alone was $15,552. In 1965, the median income for Chicago was 98.2 percent of the Illinois median, but by 1977 Chicago's median was 86.0 percent of the statewide median. Each of the six county components of the SMSA had a 1977 median household income in excess of the state median, ranging as high as 142.8 percent in DuPage County ($25,821).

Retail Sales

In 1965, 55.5 percent of the SMSA's retail sales were recorded in the City of Chicago. By 1977, that percentage had declined to 38.7 percent. Overall, sales in the SMSA improved slightly relative to Illinois. In 1965 area sales were 65.2 percent of the state total, increasing to 66.1 percent by 1977. That increase was even greater in portions of the SMSA outside Chicago.

Commutation

In 1970, there were 1,337,000 persons working in Chicago, of whom 71.9 percent also resided in the city. The percent of workers residing in other parts of the SMSA who commuted to employment in Chicago were as follows: Cook County outside Chicago, 31.3 percent; DuPage County, 22.1 percent; Kane County, 4.0 percent; Lake County, 8.7 percent; McHenry County, 7.5 percent; and Will County, 6.5 percent.

Financial Institution Structure

At year-end 1977, there were 439 banks operating 586 offices in the Chicago SMSA. On June 30, 1977 these banks had IPC deposits of $38.9 billion, of which 34.2 percent was held by the two largest banks and 45.3 percent by the four largest.

As of March 31, 1978 there were 197 savings and loan associations with 529 offices in the Chicago metropolitan area. The S&L's had local deposits of $21.3 billion. The largest in the area held 8.9 percent of these deposits, and the four largest held 26.6 percent.

Housing Stock

The six-county Chicago SMSA contained an estimated 1,276,247 one-to-four family dwelling structures as of 1970. Almost two-fifths of the structures were located in the central city, 46.7 percent were located in the urbanized area outside of Chicago, and 14 percent were located in the balance of the SMSA (Table 5).

Of the estimated 502,930 one-to-four family structures in the city of Chicago, 22.6 percent were located in census tracts classified as lower-income, 56.4 percent were in middle-income census tracts, and 21 percent were located in upper-income tracts. As regards distribution of housing stock by race of head of household, about an equal percentage of the 1-4 family structures in

Chicago (17 to 18 percent) were located in minority and mixed census tracts. The remaining 65 percent of the 1-4 family structures were located in non-minority census tracts.

With respect to the estimated 594,956 one-to-four family structures located in the urbanized area surrounding Chicago, over 70 percent of the structures were in census tracts in which the median age of the housing stock in 1977 was 27 years or less. Only 4.3 percent of the 594,956 (1-4 family) structures were located in lower-income census tracts; 35.4 percent were in middle-income census tracts; and 60.3 percent were in upper-income census tracts. About 90 percent of the 1-4 family structures in the urbanized area surrounding Chicago were located in non-minority census tracts.

As of 1970, the balance of the Chicago SMSA contained 178,361 (1-4 family) structures. Less than one percent of these structures were located in minority census tracts.

Almost 83 percent of the total estimated dwelling structures in the Chicago SMSA were single-family residences; 11.9 percent were two-family dwellings; and 5.6 percent were dwellings housing 3-to-4 familes each. The estimated 1.28 million (1-4 family) dwelling structures in the SMSA represented a total of 1.6 million (1-4 family) dwelling units. Of the 1.28 million structures in the SMSA, 88.2 percent were owner-occupied. About 7.8 percent of the owner-occupied 1-4 family structures were owned by minorities.

Of the total 2.2 million estimated housing units in the Chicago SMSA, 29.2 percent were classified as multi-family. In terms of geographic distribution, 77.1 percent of the multi-family units were located in Chicago proper, 29.2 percent were in the urbanized area surrounding Chicago, and 2.0 percent were in the balance of the SMSA. As regards income distribution, 48.6 percent of the units were located in lower-income census tracts, 38.8 percent were in [illegible] percent [illegible] the remainder [illegible]

[illegible]

[illegible]

[illegible] Chicago [illegible] dwelling structures [illegible] Chicago. This area, which [illegible] 1977 [illegible] family residential [illegible] The same was not true for [illegible] tracts located [illegible] central city [illegible] dwelling structures in the SMSA, they [illegible] residential mortgages made. [illegible] SMSA accounted for [illegible] structures in the Chicago SMSA, [illegible] percent [illegible] mortgage loans [illegible] SMSA in 1977 [illegible] survey participants [illegible] SMSA at the expense of the older census [illegible] residential mortgage loans.

[illegible] SMSA also wrote [illegible] loans totaling [illegible] outside of the SMSA.

The average size of the residential loans made in the Chicago SMSA ranged between $32,400 (older census tracts in the central city) and $41,400 (newer census tracts in the central city). Overall, the average residential loan size in the Chicago SMSA in 1977 was $37,100.

In terms of percentage distribution of home improvement loans, census tracts located in the central city and the urbanized area surrounding Chicago received an almost equal share of such loans--41.9 percent and 40.1 percent, respectively. In looking at the geographic distribution of the dollar amount of home improvement loans, however, a different picture emerges. Whereas census tracts in the central city received 27.4 percent of the dollar amount of home improvement loans in 1977, tracts in the urbanized area surrounding Chicago received 53.3 percent (Table 6). The latter statistic is supported by the fact that the average size of improvement loans was generally higher for the urbanized area outside of the central city relative to other parts of the SMSA. For example, while the average dollar amount of improvement loans for the older and newer census tracts in the central city was $4,600 and $6,200, respectively, the comparable average for the older and newer census tracts in the urbanized area outside of the central city was $8,000 and $10,700, respectively. The average for the SMSA overall was $7,500.

The geographic lending pattern for multi-family mortgage loans in the Chicago SMSA in 1977 did not mirror the geographic distribution of such units. Whereas census tracts in the central city contained 77.1 percent of the multi-family units in the Chicago SMSA (Table 5), those tracts received only 46.4 percent of the total number of multi-family mortgages and 42 percent of the total amount of such loans in the SMSA overall (Table 6). In contrast, the remaining census tracts outside of Chicago proper contained 22.9 percent of the multi-family units, but received over 50 percent of both the total number and dollar amount of multi-family mortgages written in 1977.

Income Distribution

The HMDA loan distribution by income level categories for the Chicago SMSA is shown in Table 6. The results generally do not mirror the composition and geographic distribution of the housing stock in the Chicago SMSA.

As regards 1-4 family residential loans, lower-income and middle-income census tracts appear to have been shortchanged vis-a-vis upper-income census tracts with respect to the percentage number of 1-4 family mortgages received. Whereas lower-income census tracts accounted for 10.9 percent of the 1-4 family structures in the SMSA, the former received less than 6 percent of the 1-4 family mortgages granted. By like token, middle-income tracts accounted for over 40 percent of the 1-4 family structures in the SMSA, but received 35.9 percent of the 1-4 family loans written. Upper-income census tracts, on the other hand, received 58.3 percent of the 1-4 family mortgages written in the SMSA, even though those tracts contained 43.9 percent of the 1-4 family structures.

Lastly, the pattern of multi-family mortgage lending did not correspond to the distribution of multi-family units for two of the three income categories. Although lower-income census tracts accounted for 48.6 percent of the multi-family units in the SMSA, those tracts received less than 20 percent of the number and dollar amount of loans secured by multi-family units. In contrast, upper-income census tracts received a disproportionately larger share of multi-family mortgage loans; although those tracts contained only 12.6 percent of the multi-family units, they received over 40 percent of the loans secured by multi-family units.

Head of Household Composition Distribution

As shown in Table 6, census tracts classified as non-minority generally received over 90 percent of the total number and dollar amount of the loans written in the SMSA, with the exception of non-conventional loans and home improvement loans. As was the case for the Buffalo SMSA, two factors may help to explain the disproportionate share of loan flows to non-minority census tracts in the Chicago SMSA. First, 86.2 percent of the single-family dwellings in the SMSA, which, in turn, constituted 83 percent of the SMSA's 1-4 family housing stock, were located in non-minority census tracts. Secondly, minority-headed households owned only 7.8 percent of the owner-occupied 1-4 family structures in the SMSA overall.

Mortgage Flows to Neighborhood-Types

Table 8 summarizes the housing stock and loan flows within the Chicago SMSA by neighborhood-types. As was the case in the analysis of the Buffalo SMSA, loan-to-structure (or multi-family units) ratios were computed for each of the neighborhood-types in the Chicago SMSA in order to identify loan flow trends at the neighborhood level. The findings are discussed below.

An analysis of the 1-4 family loan data revealed a lending bias in favor of non-minority neighborhoods within each of the three income groupings (lower, middle, and upper) throughout the SMSA. For example, the loan-to-structure ratio for minority, mixed, and non-minority, lower-income neighborhoods in older census tracts in the city of Chicago was .01, .05, and .14, respectively. By like token, the loan-to-structure ratio for minority, mixed, and non-minority, middle-income neighborhoods in older census tracts in the city of Chicago was .02, .03, and .06, respectively. This trend was repeated throughout the SMSA.

In view of the 1-4 family mortgage lending bias in favor of non-minority neighborhoods, it was possible to isolate the effect of income on 1-4 family loan flows in the Chicago SMSA. The data showed two trends: (1) a lending bias in favor of lower-income neighborhoods in Chicago proper; and (2) a lending bias in favor of upper-income neighborhoods outside of the central city.

With respect to multi-family loan flows at the neighborhood level, several trends emerged. First, the data showed a lending bias in favor of upper-income, non-minority neighborhoods in the city of Chicago. Second, the lending bias outside of Chicago proper was in favor of mixed neighborhoods. Third, the effect of income on multi-family loan flows to mixed neighborhoods outside of Chicago varied. For example, in the older, urbanized census tracts outside of Chicago, lower-income, mixed neighborhoods had the highest loan-to-unit ratio among the three income groupings (lower, middle, and upper). In the case of newer, urbanized census tracts outside of Chicago, however, upper-income, mixed neighborhoods had the highest loan-to-unit ratio. On the other hand, in the balance of the SMSA, middle-income, mixed neighborhoods had the highest loan-to-unit ratio.

Conclusion

The geographic pattern of mortgage lending in the Chicago SMSA in 1977 reflected the geographic distribution of 1-4 dwelling structures only with respect to the urbanized area surrounding the central city. In general, lending institutions favored the balance of the SMSA in making residential loans principally at the expense of the "older" census tracts in the central city. As regards multi-family mortgages, the distribution of such loans did not mirror the geographic distribution of multi-family units. An examination of the data also revealed that the loan distribution within specified income categories mirrored the distribution of the housing stock contained therein only to a limited extent.

With respect to loan flows to specific neighborhood-types, several trends emerged. An analysis of the 1-4 family loan data revealed a lending bias in favor of non-minority neighborhoods within each of the three income groupings (lower, middle, and upper) throughout the SMSA. When the possible effect of income on 1-4 family loan flows was examined, the data showed the following: (1) a lending bias in favor of lower-income neighborhoods in Chicago proper; end (2) a lending bias in favor of upper-income neighborhoods outside of the central city. As regards multi-family loan flows, the data revealed a lending bias in favor of upper-income, non-minority neighborhoods in the city of Chicago. Outside of the city, the lending bias was in favor of mixed neighborhoods. Lastly, the effect of income on multi-family loan flows at the neighborhood level outside of Chicago proper varied.

TABLE 5

Percentage Distribution of Estimated Dwelling Structures
Chicago SMSA, 1970

			One-to-four Family Structures							
Central City-Older	# Multi-Family Units	% Total	# Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Lower Income-Minority	99,752	15.2	19,849	1.9	17,626	11.6	12,385	17.6	49,860	3.9
Mixed	106,431	16.2	13,988	1.3	16,871	11.1	13,814	19.6	44,673	3.5
Non-minority	72,868	11.1	6,849	0.7	5,803	3.8	3,827	5.4	16,479	1.3
Middle Income-Minority	13,929	2.1	17,945	1.7	4,549	3.0	2,036	2.9	24,530	1.9
Mixed	19,415	3.0	25,788	2.5	7,865	5.2	4,267	6.0	37,920	3.0
Non-minority	96,811	14.8	114,168	10.8	54,724	36.1	17,821	25.2	186,713	14.6
Upper Income-Minority	31	---	407	---	71	0.1	62	0.1	540	---
Mixed	---	---	---	---	---	---	---	---	---	---
Non-minority	3,065	0.5	26,102	2.5	967	0.6	294	0.4	27,363	2.1
Sub-totals	412,302	(62.9)	(225,096)	(21.4)	(108,476)	(71.5)	(54,506)	(77.2)	(388,078)	(30.4)
Central City-Newer										
Lower Income-Minority	19,966	3.0	1,414	0.1	284	0.2	287	0.4	1,985	0.2
Mixed	1,108	0.2	132	---	94	0.1	17	---	243	---
Non-minority	6,967	1.1	203	---	68	---	75	0.1	346	---
Middle Income-Minority	2,769	0.4	8,974	0.9	537	0.4	228	0.3	9,739	0.8
Mixed	6,096	0.9	1,213	0.1	28	---	44	0.1	1,285	0.1
Non-minority	42,850	6.5	21,031	2.0	1,711	1.1	786	1.1	23,528	1.8
Upper Income-Minority	---	---	2,057	0.2	73	0.1	26	---	2,156	0.2
Mixed	207	---	3,041	0.3	117	0.1	15	---	3,173	0.2
Non-minority	13,227	2.0	70,419	6.7	1,423	0.9	555	0.8	72,397	5.7
Sub-totals	(93,190)	(14.2)	(108,484)	(10.3)	(4,335)	(2.9)	(2,033)	(2.9)	(114,852)	(9.0)
Balance of Urban Area-Older										
Lower Income-Minority	2,848	0.4	1,884	0.2	1,080	0.7	449	0.6	3,413	0.3
Mixed	4,684	0.7	7,305	0.7	2,620	1.7	953	1.4	10,878	0.9
Non-minority	2,685	0.4	6,256	0.6	904	0.6	246	0.3	7,406	0.6
Middle Income-Minority	427	0.1	832	0.1	132	0.1	83	0.1	1,047	0.1
Mixed	6,070	0.9	16,985	1.6	3,915	2.6	1,049	1.5	21,949	1.7
Non-minority	32,428	4.9	72,511	6.9	13,761	9.1	4,374	6.2	90,646	7.1
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---
Non-minority	5,103	0.8	32,466	3.1	1,008	0.7	321	0.5	33,795	2.6
Sub-totals	(54,245)	(8.3)	(138,239)	(13.1)	(23,420)	(15.4)	(7,475)	(10.6)	(169,134)	(13.3)

TABLE 5 (Cont'd)

	# Multi-Family Units	% Total	One-to-four Family Structures							
			# Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Balance of Urban Area-Newer										
Lower Income-Minority	98	---	1,600	0.2	146	0.1	58	0.1	1,804	0.1
Mixed	---	---	---	---	---	---	---	---	---	---
Non-minority	1,132	0.2	1,312	0.1	273	0.2	322	0.5	1,907	0.1
Middle Income-Minority	---	---	1,023	0.1	3	---	---	---	1,026	0.1
Mixed	1,443	0.2	11,418	1.1	492	0.3	217	0.3	12,127	1.0
Non-minority	28,235	4.3	77,847	7.4	4,155	2.7	1,764	2.5	83,766	6.6
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---
Mixed	343	0.1	4,611	0.4	129	0.1	54	0.1	4,794	0.4
Non-minority	51,689	7.9	311,693	29.6	5,845	3.9	2,860	4.1	320,398	25.1
Sub-totals	(82,940)	(12.6)	(409,504)	(38.8)	(11,043)	(7.3)	(5,275)	(7.5)	(425,822)	(33.4)
Balance of SMSA										
Lower Income-Minority	84	---	119	---	8	---	5	---	132	---
Mixed	---	---	---	---	0	---	---	---	---	---
Non-minority	---	---	335	---	8	---	3	---	346	---
Middle Income-Minority	---	---	---	---	---	---	---	---	---	---
Mixed	141	---	4,763	0.5	143	0.1	73	0.1	4,979	0.4
Non-minority	3,876	0.6	73,908	7.0	2,577	1.7	626	0.9	77,111	6.0
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---
Non-minority	9,255	1.4	93,620	8.9	1,588	1.0	585	0.8	95,793	7.5
Sub-totals	(13,356)	(2.0)	(172,745)	(16.4)	(4,324)	(2.9)	(1,292)	(1.8)	(178,361)	(13.9)
Grand Totals[1]	656,033	100.0	1,054,068	100.0	151,598	100.0	70,581	100.0	1,276,247	100.0

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[1] Detail may not equal 100 percent due to rounding technique.

TABLE 4 cont'd

BUFFALO

	Residential (1-4 Family)				Residential Mortgages		Home Imp. Loans		Multi-family			
	Units		Structures		#	Amt.	#	Amt.	Units		Loans	
	Number	% Total	Number	% Total	%	%	%	%	Number	% Total	# %	Amt. %
Balance of Urban Area-Newer												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	2,628	0.7	2,110	0.7	0.8	0.8	0.4	0.4	40	0.1	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	33,542	8.7	29,704	9.8	10.2	9.0	8.1	7.6	1,681	4.7	1.1	2.5
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	51,556	13.4	48,000	15.8	20.3	23.5	14.9	14.5	2,656	7.4	21.7	33.9
Total-Balance Urban Area-Newer	87,726	22.7	79,814	26.3	31.3	33.2	23.4	22.5	4,377	12.2	22.8	36.4
Total-Balance of Urban Area	169,043	43.8	143,273	47.1	53.5	57.0	38.0	36.7	12,066	33.7	34.8	41.6
Balance of the Buffalo SMSA												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	43,002	11.1	41,917	13.8	6.3	8.1	9.1	11.1	703	2.0	1.1	—
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	30,341	7.9	28,943	9.5	9.7	15.1	7.4	8.4	869	2.4	6.5	36.1
Total-Balance of the SMSA	73,343	19.0	70,860	23.3	16.0	23.2	16.5	19.5	1,572	4.4	7.6	36.1
Grand totals	386,319	100.0	303,989	100.0	100.0	100.0	100.0	100.0	35,785	100.0	100.0	100.0

CHICAGO

Population

The Chicago SMSA is composed of Cook, DuPage, Kane, Lake, McHenry and Will Counties. In 1970, its population was 6,979,000, which shows a 12.2 percent increase over 1960. The City of Chicago had a 1970 population of 3,367,000, having declined 5.2 percent in the preceding ten years. By the end of 1977, the population of the SMSA was estimated at 7,022,000 and that of the city at 3,045,000. In 1930, Chicago had 3,376,000 persons, or about the same figure recorded in 1970, but by 1977 the seven-year decline was estimated to be 10.6 percent. With rapid growth in portions of the SMSA outside Chicago (35.3 percent from 1960 to 1970), the SMSA's overall growth rate is slightly ahead of that of Illinois as a whole.

Income

In the SMSA, median household income was $19,468 in 1977; the comparable figure for the city alone was $15,552. In 1965, the median income for Chicago was 98.2 percent of the Illinois median, but by 1977 Chicago's median was 86.0 percent of the statewide median. Each of the six county components of the SMSA had a 1977 median household income in excess of the state median, ranging as high as 142.8 percent in DuPage County ($25,821).

Retail Sales

In 1965, 55.5 percent of the SMSA's retail sales were recorded in the City of Chicago. By 1977, that percentage had declined to 38.7 percent. Overall, sales in the SMSA improved slightly relative to Illinois. In 1965 area sales were 65.2 percent of the state total, increasing to 66.1 percent by 1977. That increase was even greater in portions of the SMSA outside Chicago.

Commutation

In 1970, there were 1,337,000 persons working in Chicago, of whom 71.9 percent also resided in the city. The percent of workers residing in other parts of the SMSA who commuted to employment in Chicago were as follows: Cook County outside Chicago, 31.3 percent; DuPage County, 22.1 percent; Kane County, 4.0 percent; Lake County, 8.7 percent; McHenry County, 7.5 percent; and Will County, 6.5 percent.

Financial Institution Structure

At year-end 1977, there were 439 banks operating 586 offices in the Chicago SMSA. On June 30, 1977 these banks had IPC deposits of $38.9 billion, of which 34.2 percent was held by the two largest banks and 45.3 percent by the four largest.

As of March 31, 1978 there were 197 savings and loan associations with 529 offices in the Chicago metropolitan area. The S&L's had local deposits of $21.3 billion. The largest in the area held 8.9 percent of these deposits, and the four largest held 26.6 percent.

Housing Stock

The six-county Chicago SMSA contained an estimated 1,276,247 one-to-four family dwelling structures as of 1970. Almost two-fifths of the structures were located in the central city, 46.7 percent were located in the urbanized area outside of Chicago, and 14 percent were located in the balance of the SMSA (Table 5).

Of the estimated 502,930 one-to-four family structures in the city of Chicago, 22.6 percent were located in census tracts classified as lower-income, 56.4 percent were in middle-income census tracts, and 21 percent were located in upper-income tracts. As regards distribution of housing stock by race of head of household, about an equal percentage of the 1-4 family structures in

Chicago (17 to 18 percent) were located in minority and mixed census tracts. The remaining 65 percent of the 1-4 family structures were located in non-minority census tracts.

With respect to the estimated 594,956 one-to-four family structures located in the urbanized area surrounding Chicago, over 70 percent of the structures were in census tracts in which the median age of the housing stock in 1977 was 27 years or less. Only 4.3 percent of the 594,956 (1-4 family) structures were located in lower-income census tracts; 35.4 percent were in middle-income census tracts; and 60.3 percent were in upper-income census tracts. About 90 percent of the 1-4 family structures in the urbanized area surrounding Chicago were located in non-minority census tracts.

As of 1970, the balance of the Chicago SMSA contained 178,361 (1-4 family) structures. Less than one percent of these structures were located in minority census tracts.

Almost 83 percent of the total estimated dwelling structures in the Chicago SMSA were single-family residences; 11.9 percent were two-family dwellings; and 5.6 percent were dwellings housing 3-to-4 familes each. The estimated 1.28 million (1-4 family) dwelling structures in the SMSA represented a total of 1.6 million (1-4 family) dwelling units. Of the 1.28 million structures in the SMSA, 88.2 percent were owner-occupied. About 7.8 percent of the owner-occupied 1-4 family structures were owned by minorities.

Of the total 2.2 million estimated housing units in the Chicago SMSA, 29.2 percent were classified as multi-family. In terms of geographic distribution, 77.1 percent of the multi-family units were located in Chicago proper, 29.2 percent were in the urbanized area surrounding Chicago, and 2.0 percent were in the balance of the SMSA. As regards income distribution, 48.6 percent of the units were located in lower-income census tracts, 38.8 percent were in middle-income tracts, and 12.6 percent were in upper-income census tracts. Lastly, with respect to distribution by race of head of household, 56.4 percent of the multi-family units were in non-minority census tracts, with the remainder of the units almost equally divided between minority and mixed tracts.

Aggregate HMDA Loan Flows

Table 6 summarizes the percentage distribution of 1977 HMDA loan flows for the Chicago SMSA. Additional loan flow breakdowns are presented in Tables 7 and 8.

Geographic Distribution

The geographic pattern of 1-4 family mortgage lending in the Chicago SMSA in 1977 reflected the geographic distribution of 1-4 dwelling structures only with respect to the urbanized area surrounding Chicago. That area, which contained 46.7 percent of the dwelling structures as of the 1970 Census, received an almost equal share of the total number of 1-4 family residential mortgages made in 1977 in the SMSA - 47.6 percent. The same was not true for either the older census tracts in the central city or the census tracts located in the balance of the SMSA. Whereas the older census tracts in the central city contained 30.4 percent of the 1-4 family dwelling structures in the SMSA, they received only 17.9 percent of the total number of residential mortgages made. Conversely, while the census tracts in the balance of the SMSA accounted for only 13.9 percent of the dwelling structures in the Chicago SMSA, 26.1 percent of the total number of residential mortgage loans written in the SMSA in 1977 went to those census tracts. Based on the foregoing, survey participants favored the balance of the Chicago SMSA at the expense of the older census tracts in the central city in granting residential mortgage loans.

Survey participants in the Chicago SMSA also wrote 10,750 loans totaling $417.6 million on 1-4 family properties located outside of the SMSA.

The average size of the residential loans made in the Chicago SMSA ranged between $32,400 (older census tracts in the central city) and $41,400 (newer census tracts in the central city). Overall, the average residential loan size in the Chicago SMSA in 1977 was $37,100.

In terms of percentage distribution of home improvement loans, census tracts located in the central city and the urbanized area surrounding Chicago received an almost equal share of such loans--41.9 percent and 40.1 percent, respectively. In looking at the geographic distribution of the dollar amount of home improvement loans, however, a different picture emerges. Whereas census tracts in the central city received 27.4 percent of the dollar amount of home improvement loans in 1977, tracts in the urbanized area surrounding Chicago received 53.3 percent (Table 6). The latter statistic is supported by the fact that the average size of improvement loans was generally higher for the urbanized area outside of the central city relative to other parts of the SMSA. For example, while the average dollar amount of improvement loans for the older and newer census tracts in the central city was $4,600 and $6,200, respectively, the comparable average for the older and newer census tracts in the urbanized area outside of the central city was $8,000 and $10,700, respectively. The average for the SMSA overall was $7,500.

The geographic lending pattern for multi-family mortgage loans in the Chicago SMSA in 1977 did not mirror the geographic distribution of such units. Whereas census tracts in the central city contained 77.1 percent of the multi-family units in the Chicago SMSA (Table 5), those tracts received only 46.4 percent of the total number of multi-family mortgages and 42 percent of the total amount of such loans in the SMSA overall (Table 6). In contrast, the remaining census tracts outside of Chicago proper contained 22.9 percent of the multi-family units, but received over 50 percent of both the total number and dollar amount of multi-family mortgages written in 1977.

Income Distribution

The HMDA loan distribution by income level categories for the Chicago SMSA is shown in Table 6. The results generally do not mirror the composition and geographic distribution of the housing stock in the Chicago SMSA.

As regards 1-4 family residential loans, lower-income and middle-income census tracts appear to have been shortchanged vis-a-vis upper-income census tracts with respect to the percentage number of 1-4 family mortgages received. Whereas lower-income census tracts accounted for 10.9 percent of the 1-4 family structures in the SMSA, the former received less than 6 percent of the 1-4 family mortgages granted. By like token, middle-income tracts accounted for over 40 percent of the 1-4 family structures in the SMSA, but received 35.9 percent of the 1-4 family loans written. Upper-income census tracts, on the other hand, received 58.3 percent of the 1-4 family mortgages written in the SMSA, even though those tracts contained 43.9 percent of the 1-4 family structures.

Lastly, the pattern of multi-family mortgage lending did not correspond to the distribution of multi-family units for two of the three income categories. Although lower-income census tracts accounted for 48.6 percent of the multi-family units in the SMSA, those tracts received less than 20 percent of the number and dollar amount of loans secured by multi-family units. In contrast, upper-income census tracts received a disproportionately larger share of multi-family mortgage loans; although those tracts contained only 12.6 percent of the multi-family units, they received over 40 percent of the loans secured by multi-family units.

Head of Household Composition Distribution

As shown in Table 6, census tracts classified as non-minority generally received over 90 percent of the total number and dollar amount of the loans written in the SMSA, with the exception of non-conventional loans and home improvement loans. As was the case for the Buffalo SMSA, two factors may help to explain the disproportionate share of loan flows to non-minority census tracts in the Chicago SMSA. First, 86.2 percent of the single-family dwellings in the SMSA, which, in turn, constituted 83 percent of the SMSA's 1-4 family housing stock, were located in non-minority census tracts. Secondly, minority-headed households owned only 7.8 percent of the owner-occupied 1-4 family structures in the SMSA overall.

Mortgage Flows to Neighborhood-Types

Table 8 summarizes the housing stock and loan flows within the Chicago SMSA by neighborhood-types. As was the case in the analysis of the Buffalo SMSA, loan-to-structure (or multi-family units) ratios were computed for each of the neighborhood-types in the Chicago SMSA in order to identify loan flow trends at the neighborhood level. The findings are discussed below.

An analysis of the 1-4 family loan data revealed a lending bias in favor of non-minority neighborhoods within each of the three income groupings (lower, middle, and upper) throughout the SMSA. For example, the loan-to-structure ratio for minority, mixed, and non-minority lower-income neighborhoods in older census tracts in the city of Chicago was .01, .05, and .14, respectively. By like token, the loan-to-structure ratio for minority, mixed, and non-minority, middle-income neighborhoods in older census tracts in the city of Chicago was .02, .03, and .06, respectively. This trend was repeated throughout the SMSA.

In view of the 1-4 family mortgage lending bias in favor of non-minority neighborhoods, it was possible to isolate the effect of income on 1-4 family loan flows in the Chicago SMSA. The data showed two trends: (1) a lending bias in favor of lower-income neighborhoods in Chicago proper; and (2) a lending bias in favor of upper-income neighborhoods outside of the central city.

With respect to multi-family loan flows at the neighborhood level, several trends emerged. First, the data showed a lending bias in favor of upper-income, non-minority neighborhoods in the city of Chicago. Second, the lending bias outside of Chicago proper was in favor of mixed neighborhoods. Third, the effect of income on multi-family loan flows to mixed neighborhoods outside of Chicago varied. For example, in the older, urbanized census tracts outside of Chicago, lower-income, mixed neighborhoods had the highest loan-to-unit ratio among the three income groupings (lower, middle, and upper). In the case of newer, urbanized census tracts outside of Chicago, however, upper-income, mixed neighborhoods had the highest loan-to-unit ratio. On the other hand, in the balance of the SMSA, middle-income, mixed neighborhoods had the highest loan-to-unit ratio.

Conclusion

The geographic pattern of mortgage lending in the Chicago SMSA in 1977 reflected the geographic distribution of 1-4 dwelling structures only with respect to the urbanized area surrounding the central city. In general, lending institutions favored the balance of the SMSA in making residential loans principally at the expense of the "older" census tracts in the central city. As regards multi-family mortgages, the distribution of such loans did not mirror the geographic distribution of multi-family units. An examination of the data also revealed that the loan distribution within specified income categories mirrored the distribution of the housing stock contained therein only to a limited extent.

With respect to loan flows to specific neighborhood-types, several trends emerged. An analysis of the 1-4 family loan data revealed a lending bias in favor of non-minority neighborhoods within each of the three income groupings (lower, middle, and upper) throughout the SMSA. When the possible effect of income on 1-4 family loan flows was examined, the data showed the following: (1) a lending bias in favor of lower-income neighborhoods in Chicago proper; and (2) a lending bias in favor of upper-income neighborhoods outside of the central city. As regards multi-family loan flows, the data revealed a lending bias in favor of upper-income, non-minority neighborhoods in the city of Chicago. Outside of the city, the lending bias was in favor of mixed neighborhoods. Lastly, the effect of income on multi-family loan flows at the neighborhood level outside of Chicago proper varied.

TABLE 5

Percentage Distribution of Estimated Dwelling Structures
Chicago SMSA, 1970

Central City-Older	# Multi-Family Units	% Total	One-to-four Family Structures # Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Lower Income-Minority	99,752	15.2	19,849	1.9	17,626	11.6	12,385	17.6	49,860	3.9
Mixed	106,431	16.2	13,988	1.3	16,871	11.1	13,814	19.6	44,673	3.5
Non-minority	72,868	11.1	6,849	0.7	5,803	3.8	3,827	5.4	16,479	1.3
Middle Income-Minority	13,929	2.1	17,945	1.7	4,549	3.0	2,036	2.9	24,530	1.9
Mixed	19,415	3.0	25,788	2.5	7,865	5.2	4,267	6.0	37,920	3.0
Non-minority	96,811	14.8	114,168	10.8	54,724	36.1	17,821	25.2	186,713	14.6
Upper Income-Minority	31	---	407	---	71	0.1	62	0.1	540	---
Mixed	---	---	---	---	---	---	---	---	---	---
Non-minority	3,065	0.5	26,102	2.5	967	0.6	294	0.4	27,363	2.1
Sub-totals	412,302	(62.9)	(225,096)	(21.4)	(108,476)	(71.5)	(54,506)	(77.2)	(388,078)	(30.4)
Central City-Newer										
Lower Income-Minority	19,966	3.0	1,414	0.1	284	0.2	287	0.4	1,985	0.2
Mixed	1,108	0.2	132	---	94	0.1	17	---	243	---
Non-minority	6,967	1.1	203	---	68	---	75	0.1	346	---
Middle Income-Minority	2,769	0.4	8,974	0.9	537	0.4	228	0.3	9,739	0.8
Mixed	6,096	0.9	1,213	0.1	28	---	44	0.1	1,285	0.1
Non-minority	42,850	6.5	21,031	2.0	1,711	1.1	786	1.1	23,528	1.8
Upper Income-Minority	---	---	2,057	0.2	73	0.1	26	---	2,156	0.2
Mixed	207	---	3,041	0.3	117	0.1	15	---	3,173	0.2
Non-minority	13,227	2.0	70,419	6.7	1,423	0.9	555	0.8	72,397	5.7
Sub-totals	(93,190)	(14.2)	(108,484)	(10.3)	(4,335)	(2.9)	(2,033)	(2.9)	(114,852)	(9.0)
Balance of Urban Area-Older										
Lower Income-Minority	2,848	0.4	1,884	0.2	1,080	0.7	449	0.6	3,413	0.3
Mixed	4,684	0.7	7,305	0.7	2,620	1.7	953	1.4	10,878	0.9
Non-minority	2,685	0.4	6,256	0.6	904	0.6	246	0.3	7,406	0.6
Middle Income-Minority	427	0.1	832	0.1	132	0.1	83	0.1	1,047	0.1
Mixed	6,070	0.9	16,985	1.6	3,915	2.6	1,049	1.5	21,949	1.7
Non-minority	32,428	4.9	72,511	6.9	13,761	9.1	4,374	6.2	90,646	7.1
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---
Non-minority	5,103	0.8	32,466	3.1	1,008	0.7	321	0.5	33,795	2.6
Sub-totals	(54,245)	(8.3)	(138,239)	(13.1)	(23,420)	(15.4)	(7,475)	(10.6)	(169,134)	(13.3)

TABLE 5 (Cont'd)

	# Multi-Family Units	% Total	One-to-four Family Structures							
			# Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Balance of Urban Area-Newer										
Lower Income-Minority	98	—	1,600	0.2	146	0.1	58	0.1	1,804	0.1
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	1,132	0.2	1,312	0.1	273	0.2	322	0.5	1,907	0.1
Middle Income-Minority	—	—	1,023	0.1	3	—	—	—	1,026	0.1
Mixed	1,443	0.2	11,418	1.1	492	0.3	217	0.3	12,127	1.0
Non-minority	28,235	4.3	77,847	7.4	4,155	2.7	1,764	2.5	83,766	6.6
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	343	0.1	4,611	0.4	129	0.1	54	0.1	4,794	0.4
Non-minority	51,689	7.9	311,693	29.6	5,845	3.9	2,860	4.1	320,398	25.1
Sub-totals	(82,940)	(12.6)	(409,504)	(38.8)	(11,043)	(7.3)	(5,275)	(7.5)	(425,822)	(33.4)
Balance of SMSA										
Lower Income-Minority	84	—	119	—	8	—	5	—	132	—
Mixed	—	—	—	—	0	—	—	—	—	—
Non-minority	—	—	335	—	8	—	3	—	346	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	141	—	4,763	0.5	143	0.1	73	0.1	4,979	0.4
Non-minority	3,876	0.6	73,908	7.0	2,577	1.7	626	0.9	77,111	6.0
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	9,255	1.4	93,620	8.9	1,588	1.0	585	0.8	95,793	7.5
Sub-totals	(13,356)	(2.0)	(172,745)	(16.4)	(4,324)	(2.9)	(1,292)	(1.8)	(178,361)	(13.9)
Grand Totals[1]	656,033	100.0	1,054,068	100.0	151,598	100.0	70,581	100.0	1,276,247	100.0

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[1] Detail may not equal 100 percent due to rounding technique.

TABLE 6

Summary of 1977 HMDA Loan Flows
Chicago SMSA
Percentage Distribution of Loans by Major Categories

Categories	FHA, FmHA, VA # Loans (%)	FHA, FmHA, VA Amount (%)	Other Residential # Loans (%)	Other Residential Amount (%)	Total Residential # Loans (%)	Total Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi-family # Loans (%)	Total Mortgages Multi-family Amount (%)	Non-Occupant Loans # Loans (%)	Non-Occupant Loans Amount (%)
Geographic												
Central City-Older	20.4	16.9	18.4	16.0	17.9	15.6	33.8	20.7	31.7	28.6	29.8	24.4
Central City-Newer	6.9	6.3	8.7	9.7	8.4	9.4	8.1	6.7	14.7	13.4	9.6	9.8
Total Central City	(27.3)	(23.2)	(27.1)	(25.7)	(26.3)	(25.0)	(41.9)	(27.4)	(46.4)	(42.0)	(39.4)	(34.2)
Balance Urban Area-Older	19.0	16.3	10.5	9.8	10.9	10.0	10.4	11.0	8.4	10.5	9.9	8.7
Balance Urban Area-Newer	41.0	41.6	36.8	37.4	36.7	37.2	29.7	42.3	29.0	34.5	35.0	37.7
Total Balance Urban	(60.0)	(58.0)	(47.3)	(47.2)	(47.6)	(47.2)	(40.1)	(53.3)	(37.4)	(43.0)	(44.9)	(46.4)
Balance SMSA	12.7	18.8	25.6	27.1	26.1	27.8	18.0	19.2	16.1	13.1	15.7	19.4
Totals[1]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Income Level												
Lower Income	9.6	8.5	5.8	5.4	5.8	5.4	10.0	5.9	18.8	15.6	7.0	3.6
Middle Income	48.9	44.9	35.6	30.4	35.9	30.7	49.1	36.7	38.6	41.3	41.0	38.3
Upper Income	41.5	46.6	58.7	64.2	58.3	63.9	40.9	57.4	42.6	43.1	52.0	58.1
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Head of Household Racial Composition												
Minority	8.6	5.9	1.1	0.7	1.2	0.7	11.4	5.7	1.2	0.9	1.0	0.8
Mixed	16.2	13.2	5.5	4.5	5.8	4.6	13.7	7.5	10.9	9.2	7.2	5.2
Non-minority	75.2	80.9	93.4	94.8	93.0	94.7	74.9	86.7	87.9	89.9	91.8	94.0
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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[1] Detail may not equal 100 percent due to rounding technique.

TABLE 7

1977 HMDA Mortgage Flows
Chicago SMSA

Location of Property Secured by Mortgage Loan	FHA, FMHA, VA		Other Residential		Total Residential		Total Improvement		Total Mortgages Multi-family		Non-occupant Loans	
	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)
Central City-Older												
Lower Income-Minority	2.9	2.2	0.4	0.2	0.4	0.2	4.3	2.0	0.6	0.4	0.3	0.1
Mixed	3.3	3.1	2.0	1.8	2.0	1.7	2.7	1.7	7.1	5.6	2.6	2.1
Non-minority	1.4	1.4	2.1	2.1	2.0	2.1	1.3	1.0	9.0	8.2	2.5	2.1
Middle Income-Minority	2.2	1.4	0.4	0.3	0.4	0.3	4.2	2.2	0.5	0.2	0.4	0.2
Mixed	3.4	2.6	1.1	0.7	1.1	0.7	5.8	2.8	1.1	0.6	1.4	0.8
Non-minority	6.9	5.9	10.1	8.7	10.1	8.3	14.4	10.1	12.9	13.0	20.8	17.3
Upper Income-Minority	0.1	---	---	---	---	---	0.1	0.1	---	---	---	---
Mixed	---[1]	---	---	---	---	---	---	---	---	---	---	---
Non-minority	0.2	0.1	1.7	2.2	1.7	2.2	1.1	0.8	0.5	0.5	1.9	1.7
*Total-Central City-Older	(20.4)	(16.9)	(18.4)	(16.0)	(17.9)	(15.6)	(33.8)	(20.7)	(31.7)	(28.6)	(29.8)	(24.4)
Central City-Newer												
Lower Income-Minority	0.1	---	---	---	---	---	0.1	---	0.1	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	---	---	0.1	0.1	0.1	0.1	---	---	0.5	0.4	0.1	0.1
Middle Income-Minority	0.5	0.3	0.1	0.1	0.2	0.1	1.7	0.8	---	---	0.2	0.1
Mixed	0.2	0.3	0.1	---	0.1	---	0.1	0.1	0.1	---	---	---
Non-minority	1.9	2.3	2.8	2.6	2.6	2.5	1.6	1.9	9.2	7.7	3.0	2.4
Upper Income-Minority	0.1	0.1	---	---	---	---	0.4	0.2	---	0.1	---	---
Mixed	0.4	0.5	0.1	0.1	0.1	0.1	0.6	0.3	---	---	0.1	---
Non-minority	3.7	2.8	5.5	6.8	5.4	6.6	3.6	3.4	4.8	5.1	6.2	7.2
*Total-Central City-Newer	(6.9)	(6.3)	(8.7)	(9.7)	(8.4)	(9.4)	(8.1)	(6.7)	(14.7)	(13.4)	(9.6)	(9.9)
**Total-Central City	((27.3))	((23.2))	((27.1))	((25.7))	((26.3))	((25.0))	((41.9))	((27.4))	((46.5))	((42.0))	((39.4))	((34.2))
Balance of Urban Area-Older												
Lower Income-Minority	1.0	0.6	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	---
Mixed	0.4	0.5	0.5	0.4	0.6	0.4	0.9	0.5	1.1	0.7	1.4	1.1
Non-minority	0.4	0.4	0.4	0.5	0.4	0.5	0.3	0.2	0.2	0.2	0.1	0.1
Middle Income-Minority	1.6	1.2	---	---	---	---	0.1	0.1	---	---	---	---
Mixed	5.4	4.2	1.1	0.8	1.2	0.9	1.7	1.0	0.9	1.4	1.6	1.2
Non-minority	9.0	8.4	5.5	4.6	5.7	4.8	4.9	4.6	5.3	6.8	5.5	4.8
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	1.2	1.1	3.0	3.3	2.9	3.3	2.3	4.5	0.8	1.2	1.2	1.5
*Total-Balance Urban Area-Older	(19.0)	(16.3)	(10.5)	(9.8)	(10.9)	(10.0)	(10.4)	(11.0)	(8.4)	(10.4)	(9.9)	(8.7)

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[1] Dashes indicate percentage was either nonexistent or less than 0.1 percent.

TABLE 7 (Cont'd)

Location of Property Secured by Mortgage Loan	FHA, FMHA, VA # Loans (%)	FHA, FMHA, VA Amount (%)	Other Residential # Loans (%)	Other Residential Amount (%)	Total Residential # Loans (%)	Total Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi-family # Loans (%)	Total Mortgages Multi-family Amount (%)	Non-occupant Loans # Loans (%)	Non-occupant Loans Amount (%)
Balance of Urban Area-Newer												
Lower Income-Minority	0.1	---	---	---	---	---	0.1	0.1	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	---	---	---	---
Middle Income-Minority	0.1	0.1	---	---	---	---	0.2	0.1	---	---	---	---
Mixed	2.2	1.1	0.2	0.1	0.2	0.1	1.2	0.6	---	---	0.1	---
Non-minority	10.4	10.9	5.1	4.4	5.3	4.7	6.1	6.3	5.9	8.4	3.8	3.9
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	0.4	0.7	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.1	0.1
Non-minority	27.6	28.6	31.1	32.3	30.7	31.9	21.7	34.8	22.8	25.8	31.1	33.7
*Total-Balance Urban Area-Newer	(41.0)	(41.6)	(36.8)	(37.4)	(36.7)	(37.2)	(29.7)	(42.3)	(29.0)	(34.5)	(35.0)	(37.7)
**Total-Balance of Urban Area	((60.0))	((58.0))	((47.3))	((47.1))	((47.6))	((47.2))	((40.1))	((53.4))	((37.4))	((44.9))	((44.9))	((46.4))
Balance of the Chicago SMSA												
Lower Income-Minority	---	---	---	---	---	---	0.1	---	---	0.1	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	---	---	---	0.1	---	0.1	---	---	---	---	---	---
Middle Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	0.5	0.3	0.2	0.1	0.3	0.2	0.3	0.2	0.2	0.4	---	0.1
Non-minority	4.5	5.9	8.4	7.7	8.6	8.0	6.9	6.0	2.4	2.6	4.1	4.5
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	7.7	12.6	17.0	19.1	17.2	19.5	10.7	13.1	13.4	10.0	12.0	14.7
**Total-Balance of the SMSA	((12.7))	((18.8))	((25.6))	((27.1))	((26.1))	((27.8))	((18.0))	((19.2))	((16.1))	((13.1))	((16.0))	((19.4))
***Grand Totals[2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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[2] Totals may not equal 100.0 percent in all cases due to rounding technique.

TABLE 8

CHICAGO

	Residential (1-4 Family)				Residential Mortgage		Home Imp. Loans		Multi-family			
	Units		Structures								Loans	
	Number	% Total	Number	% Total	# %	Amt. %	# %	Amt. %	Number	% Total	# %	Amt. %
Central City-Older												
Lower Income-Minority	98,324	6.2	49,860	3.9	0.4	0.2	4.3	0.2	99,752	15.2	0.6	0.4
Mixed	95,951	6.0	44,673	3.5	2.0	1.7	2.7	1.7	106,431	16.2	7.1	5.6
Non-minority	31,818	2.0	16,479	1.3	2.0	2.1	1.3	1.0	72,868	11.1	9.0	8.2
Middle Income-Minority	34,105	2.1	24,530	1.9	0.4	0.3	4.2	2.2	13,929	2.1	0.5	0.2
Mixed	56,389	3.6	37,920	3.0	1.1	0.7	5.8	2.8	19,415	3.0	1.1	0.6
Non-minority	285,814	18.0	186,713	14.6	10.1	8.3	14.4	10.1	96,811	14.8	12.9	13.0
Upper Income-Minority	766	0.1	540	---	---	---	0.1	0.1	31	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	29,032	1.8	27,363	2.1	1.7	2.2	1.1	0.8	3,065	0.5	0.5	0.5
Total-Central City-Older	632,199	39.8	388,078	30.4	17.9	15.6	33.8	20.7	412,302	62.9	31.7	28.6
Central City-Newer												
Lower Income-Minority	2,966	0.2	1,985	0.2	---	---	0.1	---	19,966	3.0	0.1	---
Mixed	380	---	243	---	---	---	---	---	1,108	0.2	---	---
Non-minority	529	---	346	---	0.1	0.1	---	---	6,967	1.1	0.5	0.4
Middle Income-Minority	10,806	0.7	9,739	0.8	0.2	0.1	1.7	0.8	2,769	0.4	---	---
Mixed	1,416	0.1	1,285	0.1	0.1	---	0.1	0.1	6,096	0.9	0.1	---
Non-minority	26,437	1.7	23,528	1.8	2.6*	2.5	1.6	1.9	42,850	6.5	9.2	7.7
Upper Income-Minority	2,295	0.1	2,156	0.2	---	---	0.4	0.2	---	---	---	0.1
Mixed	3,324	0.2	3,173	0.2	0.1	0.1	0.6	0.3	207	---	---	---
Non-minority	73,051	4.6	72,397	5.7	5.4	6.6	3.6	3.4	13,227	2.0	4.8	5.1
Total-Central City-Newer	121,204	7.6	114,852	9.0	8.4	9.4	8.1	6.7	93,190	14.2	14.7	13.4
Total Central City	753,403	47.4	502,930	39.4	26.3	25.0	41.9	27.4	505,492	77.1	46.5	42.0
Balance of Urban Area-Older												
Lower Income-Minority	5,607	0.4	3,413	0.3	0.1	0.1	0.2	0.1	2,848	0.4	0.1	0.1
Mixed	15,865	1.0	10,878	0.9	0.6	0.4	0.9	0.5	4,684	0.7	1.1	0.7
Non-minority	8,900	0.6	7,406	0.6	0.4	0.5	0.3	0.2	2,685	0.4	0.2	0.2
Middle Income-Minority	1,387	0.1	1,047	0.1	---	---	0.1	0.1	427	0.1	---	---
Mixed	28,442	1.8	21,949	1.7	1.2	0.9	1.7	1.0	6,070	0.9	0.9	1.4
Non-minority	115,002	7.2	90,646	7.1	5.7	4.8	4.9	4.6	32,428	4.9	5.3	6.8
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	35,597	2.2	33,795	2.6	2.9	3.3	2.3	4.5	5,103	0.8	0.8	1.2
Total-Balance Urban Area-Older	210,800	13.3	169,134	13.3	10.9	10.0	10.4	11.0	54,245	8.3	8.4	10.4

TABLE 8 cont'd

CHICAGO

	Residential (1-4 Family)				Residential Mortgage		Home Imp. Loans		Multi-family			
	Units		Structures		#	Amt.	#	Amt.			#	Amt.
	Number	% Total	Number	% Total	%	%	%	%	Number	% Total	%	%
Balance of Urban Area-Never												
Lower Income-Minority	1,972	0.1	1,804	0.1	---	---	0.1	0.1	98	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	2,822	0.2	1,907	0.1	0.1	0.1	0.1	0.2	1,132	0.2	---	---
Middle Income-Minority	1,029	0.1	1,026	0.1	---	---	0.2	0.1	---	---	---	---
Mixed	12,411	0.8	12,127	1.0	0.2	0.1	1.2	0.6	1,443	0.2	---	---
Non-minority	88,042	5.5	83,766	6.6	5.3	4.7	6.1	6.3	28,235	4.3	5.9	8.4
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	4,890	0.3	4,794	0.4	0.3	0.4	0.4	0.3	343	0.1	0.3	0.3
Non-minority	331,378	20.9	320,398	25.1	30.7	31.9	21.7	34.8	31,689	7.9	22.8	25.8
Total-Balance Urban Area-Never	442,544	27.9	425,822	33.4	36.7	47.2	29.7	42.3	82,940	12.6	29.0	34.5
Total-Balance of Urban Area	653,344	41.2	594,956	46.7	47.6	57.2	40.1	53.4	137,185	20.9	37.4	44.9
Balance of the Chicago SMSA												
Lower Income-Minority	153	---	132	---	---	---	0.1	---	84	---	---	0.1
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	359	---	346	---	---	0.1	---	---	---	---	---	---
Middle Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	5,088	0.3	4,979	0.4	0.3	0.2	0.3	0.2	141	---	0.2	0.4
Non-minority	78,429	4.9	77,111	6.0	8.6	8.0	6.9	6.0	3,876	0.6	2.4	2.6
Upper Income-Minority	---	---	---	---	---	---	---	---	---	---	---	---
Mixed	---	---	---	---	---	---	---	---	---	---	---	---
Non-minority	97,595	6.1	95,793	7.5	17.2	19.5	10.7	13.1	9,255	1.4	13.4	10.0
Total-Balance of the SMSA	181,624	11.4	178,361	13.9	26.1	27.8	18.0	19.2	13,356	2.0	16.1	13.1
Grand totals	1,588,371	100.0	1,276,247	100.0	100.0	100.0	100.0	100.0	656,033	100.0	100.0	100.0

SAN DIEGO

Population

San Diego County, the sole component of the San Diego SMSA, had a 1970 population of 1,358,000. This figure shows a 31.4 percent growth since 1960, somewhat higher than the 27.0 percent increase registered by California as a whole. The City of San Diego had 697,000 persons in 1970, a 21.6 percent increase over 1960. That is the smallest ten-year growth recorded for the city since 1900, with the census showing an average decennial increase of 72 percent over that seventy year span.

Income

The 1977 median household income was $14,101 in San Diego County and $13,691 in the City of San Diego, both of which figures are below the California median of $15,629. Since 1965, income in other areas of the state has been rising faster than in the San Diego area. In 1965, the San Diego City median income was 103.5 percent of the statewide median, while by 1977 it had declined to 87.6 percent. The decline for San Diego County was not quite so large: from 100.1 percent to 90.2 percent.

Retail Sales

In 1965 retail sales in the City of San Diego represented 53.9 percent of the county's total. In 1977, that percentage had declined to 49.1 percent. Sales in the city improved, however, when compared to those of the state. In 1965, 2.8 percent of California's retail sales occurred in San Diego, but that percentage grew to 3.8 percent by 1977. Similarly, the County's sales increased from 5.3 percent to 7.7 percent of the statewide total.

Commutation

In 1970, there were 305,000 persons employed in the City of San Diego and 505,000 employed in the whole county. Of those working in the city, 26.7 percent commuted from other parts of San Diego County. Only 1.4 percent of those working in the county came from outside the county.

Financial Institutions Structure

There were thirty-four commercial banks operating 294 offices in the San Diego SMSA as of December 31, 1977. At mid-year 1979, these offices held $3.9 billion in IPC deposits, of which the four largest banks held 74.2 percent.

On March 31, 1978, twenty-nine savings and loan associations operated a total of 189 offices in the San Diego area. The S&L's had local deposits of $5.5 billion. The largest of the S&L's had a 29.7 percent deposit share, with the four largest holding 64.9 percent.

Housing Stock

The single-county San Diego SMSA contained an estimated 331,481 one-to-four family structures as of 1970. About 56.9 percent of the 1-4 family structures were located in the central city, 32 percent were located in the urbanized area outside of San Diego proper, and 11 percent were located in the balance of the SMSA (Table 9).

Only 10.5 percent of the estimated 188,628 (1-4 family) structures in the city of San Diego were in lower-income census tracts. About 33.9 percent of the 1-4 structures were in middle-income tracts, and 55.5 percent were located in upper-income tracts. As regards distribution by race of head of household, 5 percent of the 1-4 structures were in minority census tracts, 30.6 percent were in mixed census tracts, and 64.4 percent were in non-minority tracts.

With respect to the estimated 106,616 (1-4 family) structures in the urbanized area surrounding San Diego, 90 percent of the 1-4 structures were located in census tracts in which the median age of the housing stock in 1977 was 27 years or less. All of the 1-4 structures were located in either mixed or non-minority tracts. Lower-income census tracts in the urbanized area surrounding San Diego accounted for 3.5 percent of the 1-4 structures; middle-income tracts accounted for 28.6 percent; and upper-income tracts accounted for 67.9 percent.

As of the 1970 Census, the balance of the San Diego SMSA contained an estimated 36,237 (1-4 family) dwelling structures. Of this number, one-fourth was located in mixed census tracts, while the balance was located in non-minority census tracts. In terms of income breakdown, 5.9 percent of the structures were in lower-income census tracts, 38.5 percent were in middle-income census tracts, and 55.6 percent were located in upper-income census tracts.

About 95 percent of the estimated 1-4 dwelling structures in the San Diego SMSA were single-family residences; two-family dwellings constituted 3.3 percent of the total; and 3-4 family dwellings accounted for only 1.7 percent. The 331,481 (1-4 family) dwellings structures in the San Diego SMSA represented a total of 334,809 (1-4 family) units. Within the San Diego SMSA, minority-headed households owned only 2.7 percent of the 1-4 structures that were classified "owner-occupied."

Of the total 414,301 dwelling units in the San Diego SMSA, 79,492, or 19.2 percent, were classified as "multi-family." Seventy-one percent of the multi-family units were located in San Diego proper, 27.6 percent were located in the urbanized area surrounding the central city, and only 1.4 percent were located in the balance of the SMSA. As regards income breakdown, 21.9 percent of the units were in lower-income census tracts, 49.1 percent were in middle-income tracts, and 29 percent were in upper-income census tracts. Lastly, mixed and non-minority tracts accounted for 29.2 percent and 69.6 percent, respectively, of the multi-family units in the SMSA; minority tracts contained only 1.2 percent of the units.

Aggregate HMDA Loan Flows

Table 10 summarizes the percentage distribution of 1977 HMDA loan flows within the San Diego SMSA. Additional breakdowns are shown in Tables 11 and 12.

Geographic Distribution

In general, the geographic pattern of residential mortgage lending in the San Diego SMSA in 1977 reflected the geographic distribution of 1-4 family structures only with respect to census tracts in the central city. The city of San Diego, which contained an estimated 56.9 percent of the 1-4 structures, received about 54.7 percent of the total number of 1-4 family residential loans written in the SMSA in 1977. This situation did not hold for the urbanized area outside of San Diego proper. Whereas the urbanized area outside of the city accounted for 32.1 percent of the SMSA's 1-4 family structures, that area received only 24.1 percent of the number of residential mortgage loans written. In contrast, census tracts in the balance of the SMSA received double the percentage of loans relative to the percentage of 1-4 family dwellings contained therein.

In addition to the foregoing, survey participants in the San Diego SMSA wrote 16,068 loans totaling $894 million on 1-4 family structures located outside of the SMSA.

Of the three SMSAs studied, San Diego claimed the highest average value for 1-4 family residential loans written in 1977. The average dollar value for residential loans in the SMSA overall was 51,900, as compared to $37,100 and $14,700 for Chicago and Buffalo, respectively.

The geographic lending pattern for multi-family loans in the San Diego SMSA generally corresponded with the geographic distribution of multi-family units. For example, older census tracts in both the central city and the urbanized area surrounding the city, as well as the tracts in the balance of the SMSA, received approximately the same percentage number of multi-family mortgage loans as the percentage of multi-family units contained therein.

The sole exception to this pattern involved newer census tracts in both the central city and the urbanized area surrounding the city. Whereas newer census tracts in San Diego proper contained 44.7 percent of the multi-family units, those tracts received 37.3 percent of the multi-family loans written in the SMSA in 1977. Newer census tracts in the urbanized area surrounding San Diego, on the other hand, received a higher percentage of multi-family loans (29.9 percent) relative to the percentage number of such units in those tracts (23.9 percent).

Income Distribution

Table 10 shows the percentage distribution by income level of the loans reported on HMDA statements by survey participants in the San Diego SMSA. The results generally do not reflect the geographic distribution of the housing stock in the SMSA.

In comparing the distribution of 1-4 family structures by income level with the residential loan distribution, it appears that survey participants favored upper-income census tracts, primarily at the expense of middle-income census tracts. Specifically, upper-income census tracts accounted for 59.5 percent of the 1-4 family residential structures in the SMSA, but received a much higher percentage of the total number of residentiel loans written--73.2 percent. Middle-income census tracts, on the other hand, received only 21.9 percent of the number of residential loans written even though those tracts contained 32.7 percent of the 1-4 family dwelling structures in the SMSA.

The pattern of multi-family mortgage lending also did not correspond to the distribution of multi-family units among all of the income categories.

Whereas lower-income census tracts contained 21.9 percent of the multi-family units in the San Diego SMSA, they received 15.2 percent of the number and 8.5 percent of the dollar amount of the multi-family mortgage loans written. The share of such loans to middle- and upper-income census tracts, on the other hand, generally approximated or exceeded the percentage of multi-family units in those tracts.

Head of Household Composition Distribution

Whereas non-minority census tracts received about 90 percent or more of the loans reported on HMDA statements in the Buffalo and Chicago SMSAs, this did not hold true for the San Diego SMSA. The figures in Table 10 show that non-minority census tracts received from 50 to 75 percent of the fund flows for the major loan categories reported. Mixed census tracts received between 20 and 50 percent of the fund flows, while minority tracts received 0.3 percent to 2 percent, depending on the loan category under discussion.

In the case of 1-4 family residential loans, non-minority census tracts accounted for 65.1 percent of the 1-4 family structures, but received 74.6 percent of the 1-4 family residential loans written in 1977. Minority and mixed census tracts, on the other hand, received a smaller percentage of such loans relative to the percentage number of 1-4 family structures in those two census groupings. As regards multi-family mortgages, the respective percentage loan flows for the three racial census tract groupings corresponded closely to the actual percentage distribution of multi-family units contained therein.

Mortgage Flows to Neighborhood-Types

Table 12 summarizes the housing stock and loan flows within the San Diego SMSA by neighborhood-type. As was the case for the two other SMSAs studied, ratios relating number of loans to number of structures were computed for each of the neighborhood-types in the San Diego SMSA. The findings are presented below.

With respect to 1-4 family loan flows at the neighborhood level, the data showed a general lending bias in favor of non-minority, upper-income neighborhoods. Two exceptions to this trend were observed, however. First, in the newer, urbanized tracts outside of San Diego, non-minority, lower-income neighborhoods exhibited the highest loan-to-structure ratio among the neighborhood-types represented. Secondly, mixed, upper-income neighborhoods had the highest loan-to-structure ratio among neighborhood-types in the balance of the SMSA.

As regards multi-family loan flows at the neighborhood level, no trend(s) emerged. For example, non-minority, upper-income neighborhoods had the highest loan-to-unit ratio in the older census tracts in San Diego proper. In the case of newer census tracts in San Diego, however, minority, lower-income neighborhoods had the highest loan-to-unit ratio for multi-family loans. The results for neighborhoods outside of San Diego were equally diverse.

Conclusion

In general, the geographic pattern of 1-4 family residential mortgage lending in the San Diego SMSA reflected the geographic distribution of 1-4 family structures only with respect to the central city. Residential 1-4 mortgage flows showed that survey participants tended to favor the balance of the SMSA, principally at the expense of the urbanized area outside of the central city. The geographic lending pattern for multi-family units in the San Diego SMSA corresponded to the geographic distribution of such units in several areas of the SMSA. With respect to the distribution of 1-4 family residential loans by income level, survey participants tended to favor upper-income census tracts. The San Diego SMSA was the only SMSA studied in which non-minority census tracts received less than 90 percent of the loan flows reported on HMDA statements. Lastly, of the three SMSAs examined, loan flows to specific neighborhood-types were the most varied in the San Diego SMSA.

TABLE 9

Percentage Distribution of Estimated Dwelling Structures
San Diego SMSA, 1970

	# Multi-Family Units	% Total	One-to-four Family Structures							
			# Single Family	% Total	# Two Family	% Total	#3-4 Family	% Total	# Total Structures	% Total
Central City-Older										
Lower Income-Minority	367	0.4	3,854	1.2	237	2.2	116	2.1	4,207	1.3
Mixed	6,095	7.7	4,211	1.3	465	4.3	322	5.8	4,998	1.5
Non-minority	2,793	3.5	474	0.2	106	1.0	83	1.4	663	0.2
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	3,163	4.0	10,003	3.2	863	8.0	459	8.2	11,325	3.4
Non-minority	8,165	10.3	14,496	4.6	1,157	10.7	588	10.6	16,241	4.9
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	254	0.3	2,483	0.8	168	1.5	57	1.0	2,708	0.8
Non-minority	58	0.1	4,377	1.4	36	0.3	6	0.1	4,417	1.3
Sub-totals	(20,895)	(26.3)	(39,898)	(12.7)	(3,030)	(28.0)	(1,631)	(29.3)	(44,559)	(13.4)
Central City-Newer										
Lower Income-Minority	186	0.2	1,423	0.5	110	1.0	29	0.5	1,562	0.4
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	6,031	7.6	7,511	2.4	524	4.8	424	7.6	8,459	2.6
Middle Income-Minority	420	0.5	1,639	0.5	100	0.9	44	0.8	1,783	0.5
Mixed	2,018	2.5	12,047	3.8	601	5.5	199	3.6	12,847	3.9
Non-minority	13,894	17.5	19,829	6.3	.1,253	11.6	734	13.2	21,816	6.6
Upper Income-Minority	—	—	1,860	0.6	12	0.1	5	0.1	1,877	0.6
Mixed	3,072	3.9	25,245	8.0	413	3.8	221	4.0	25,879	7.8
Non-minority	9,918	12.5	68,157	21.6	1,173	10.8	516	9.3	69,846	21.1
Sub-totals	(35,539)	(44.7)	(137,711)	(43.7)	(4,186)	(38.5)	(2,172)	(39.0)	(144,069)	(43.5)
Balance of Urban Area-Older										
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	994	1.3	1,858	0.6	116	1.1	96	1.7	2,070	0.6
Non-minority	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	650	0.8	2,913	0.9	204	1.9	104	1.9	3,221	1.0
Non-minority	338	0.4	1,304	0.4	44	0.4	57	1.0	1,405	0.4
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—
Non-minority	959	1.2	3,728	1.2	158	1.4	110	2.0	3,996	1.2
Sub-totals	(2,941)	(3.7)	(9,803)	(3.1)	(522)	(4.8)	(367)	(6.6)	(10,692)	(3.2)

TABLE 9 Cont'd

			One-to-four Family Structures							
Balance of Urban Area-Newer	# Multi-Family Units	% Total	# Single Family	% Total	# Two Family	% Total	# 3-4 Family	% Total	# Total Structures	% Total
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	138	0.2	916	0.3	45	0.4	43	0.8	1,004	0.3
Non-minority	661	0.8	513	0.2	143	1.3	36	0.6	692	0.2
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	4,521	5.7	13,715	4.4	724	6.7	305	5.4	14,744	4.4
Non-minority	5,148	6.5	10,351	3.3	381	3.5	400	7.2	11,132	3.4
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	2,251	2.8	17,896	5.7	503	4.6	100	1.8	18,499	5.6
Non-minority	6,280	7.9	48,580	15.4	888	8.2	385	6.9	49,853	15.0
Sub-totals	(18,999)	(23.9)	(91,971)	(29.2)	(2,684)	(24.8)	(1,269)	(22.8)	(95,924)	(28.9)
Balance of SMSA										
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	19	—	263	0.1	—	—	3	—	266	0.1
Non-minority	131	0.2	1,840	0.6	37	0.3	5	0.1	1,882	0.6
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	5	—	1,250	0.4	29	0.3	5	0.1	1,284	0.4
Non-minority	681	0.9	12,388	3.9	203	1.9	84	1.5	12,675	3.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—
Mixed	45	0.1	7,274	2.3	29	0.3	7	0.1	7,310	2.2
Non-minority	237	0.3	12,683	4.0	110	1.0	27	0.5	12,820	3.9
Sub-totals	(1,118)	(1.4)	(35,698)	(11.3)	(408)	(3.8)	(131)	(2.3)	(36,237)	(11.0)
Grand Totals[1]	79,492	100.0	315,081	100.0	10,830	100.0	5,570	100.0	331,481	100.0

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[1] Detail may not equal 100 percent due to rounding technique.

TABLE A

[illegible]
San Diego [illegible]
Percentage Distribution of [illegible] by Major Categories

[illegible]	[illegible] # Loans (%)	[illegible] Amount (%)	[illegible] Residential # Loans (%)	[illegible] Residential Amount (%)	[illegible] Residential # Loans (%)	[illegible] Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi Family # Loans (%)	Total Mortgages Multi Family Amount (%)	Non Occupant Loans # Loans (%)	Non Occupant Loans Amount (%)
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	26.0	[illegible]	10.6	1.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	37.3	46.4	43.0	47.1
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3.7	3.4	2.6	2.0
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25.0	44.2
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.7	1.7	17.0	10.0
[illegible]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
[illegible]												
[illegible] Income	2.3	2.0	0.1	4.4	4.9	4.2	16.3	[illegible]	13.2	8.5	6.9	5.0
[illegible] Income	16.1	16.1	27.6	20.3	21.9	20.2	15.9	16.8	50.8	48.4	32.1	26.8
[illegible] Income	81.6	81.8	72.3	75.3	73.2	75.6	67.8	70.3	36.0	43.1	61.0	68.2
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Head of Household Racial Composition												
Minority	1.0	0.7	0.6	0.3	0.7	0.3	2.0	2.0	1.8	0.8	1.3	0.6
Mixed	50.7	49.1	21.4	20.2	24.7	23.0	40.7	28.4	30.9	29.6	28.5	27.8
Non-minority	48.1	50.2	78.0	79.5	74.6	76.7	57.3	69.6	67.3	69.6	70.2	71.7
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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¹Detail may not equal 100 percent due to rounding technique.

TABLE 11

1977 HMDA Mortgage Flows
San Diego SMSA

Location of Property Secured by Mortgage Loan	FHA, FmHA, VA		Other Residential		Total Residential		Total Improvement		Total Mortgages Multi-family		Non-occupant Loans	
	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)	# Loans (%)	Amount (%)
Central City-Older												
Lower Income-Minority	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.3	1.0	0.4	0.5	0.2
Mixed	0.4	0.3	0.6	0.4	0.6	0.4	0.4	0.4	4.2	2.2	1.2	0.7
Non-minority	—[1]	—	0.1	0.1	0.1	0.1	—	0.1	0.8	0.6	0.1	0.1
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	0.9	0.7	1.5	1.1	1.4	1.1	1.1	1.1	7.1	3.0	2.9	1.9
Non-minority	0.4	0.4	3.0	2.9	1.7	2.8	1.4	1.8	11.6	6.3	4.5	3.9
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	0.2	0.2	0.5	0.5	0.5	0.4	0.4	0.4	1.1	0.2	0.8	0.6
Non-minority	0.2	0.2	1.0	1.2	0.9	1.1	0.6	1.1	0.5	0.3	0.6	0.6
*Total-Central City-Older	(2.3)	(1.9)	(6.9)	(6.2)	(6.3)	(5.9)	(4.2)	(5.1)	(26.4)	(13.8)	(10.6)	(7.8)
Central City-Newer												
Lower Income-Minority	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.1	0.4	0.1
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	0.7	0.8	3.5	3.2	3.1	2.9	1.7	2.2	7.0	4.4	3.2	2.9
Middle Income-Minority	0.2	0.1	0.1	0.1	0.1	0.1	0.6	0.5	0.5	0.3	0.3	0.1
Mixed	5.6	5.3	1.2	1.0	1.7	1.4	3.0	3.2	3.1	1.4	1.8	1.5
Non-minority	1.3	1.3	4.6	4.4	4.3	4.2	2.1	2.3	19.5	15.5	7.0	6.4
Upper Income-Minority	0.5	0.4	0.1	0.1	0.2	0.1	0.9	0.9	—	—	0.2	0.1
Mixed	21.7	20.6	6.0	6.6	7.7	7.9	9.4	9.7	1.3	3.7	5.5	7.9
Non-minority	16.9	18.1	33.0	35.1	31.0	33.3	23.9	31.2	5.7	15.0	25.6	28.0
*Total-Central City-Newer	(47.0)	(46.8)	(48.7)	(50.5)	(48.3)	(50.0)	(41.8)	(50.3)	(37.3)	(40.4)	(43.9)	(47.1)
**Total-Central City	((49.3))	((48.7))	((55.6))	((56.7))	((54.7))	((55.9))	((46.0))	((55.4))	((63.7))	((54.2))	((54.3))	((54.9))
Balance of Urban Area-Older												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	0.6	0.5	0.2	0.1	0.2	0.2	13.4	0.5	0.4	0.1	0.4	0.3
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	0.5	1.0	0.3	0.2	0.3	0.3	0.4	0.3	1.9	2.0	0.7	0.4
Non-minority	—	—	0.3	0.3	0.3	0.3	0.1	0.3	0.3	0.1	0.4	0.3
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	0.2	0.2	0.9	1.0	0.8	0.9	0.6	0.8	1.0	1.2	1.1	1.0
*Total-Balance Urban Area-Older	(1.3)	(1.7)	(1.7)	(1.7)	(1.7)	(1.7)	(14.5)	(1.9)	(3.6)	(3.4)	(2.6)	(2.0)

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[1] Dashes indicate percentage was either nonexistent or less than 0.1 percent.

TABLE 11 Cont'd

Location of Property Secured by Mortgage Loan	FHA, FMHA, VA # Loans (%)	FHA, FMHA, VA Amount (%)	Other Residential # Loans (%)	Other Residential Amount (%)	Total Residential # Loans (%)	Total Residential Amount (%)	Total Improvement # Loans (%)	Total Improvement Amount (%)	Total Mortgages Multi-family # Loans (%)	Total Mortgages Multi-family Amount (%)	Non-occupant Loans # Loans (%)	Non-occupant Loans Amount (%)
Balance of Urban Area-Newer												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.6	0.3	0.4	0.3
Non-minority	—	—	0.3	0.3	0.2	0.2	—	—	0.9	0.3	0.5	0.4
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	2.0	2.1	2.7	2.3	2.7	2.3	2.1	2.1	7.1	7.7	5.0	4.1
Non-minority	1.3	1.2	2.4	2.2	2.3	2.2	1.6	1.5	6.8	8.6	4.1	3.7
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	5.5	5.2	2.8	2.4	3.1	2.6	5.5	5.2	3.1	3.9	3.4	3.1
Non-minority	15.3	15.7	14.0	13.9	14.0	13.9	14.8	16.8	11.4	13.9	12.4	12.6
*Total-Balance Urban Area-Newer	(24.3)	(24.3)	(22.3)	(21.3)	(22.4)	(21.4)	(24.1)	(25.6)	(29.9)	(34.7)	(25.8)	(24.2)
**Total-Balance of Urban Area	((25.7))	((26.1))	((24.1))	((23.0))	((24.1))	((23.0))	((38.6))	((27.5))	((33.6))	((38.1))	((28.4))	((26.2))
Balance of San Diego SMSA												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	0.1	—	0.1	0.1	0.1	0.1	0.1	0.1	—	—	0.1	0.1
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	1.3	1.2	0.8	0.5	0.8	0.6	0.5	0.4	0.1	1.2	1.3	0.6
Non-minority	2.7	2.7	5.5	5.1	5.4	5.1	3.1	3.3	0.8	1.6	4.2	3.8
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	11.7	11.8	4.6	5.0	5.5	5.7	4.5	5.0	0.7	3.1	4.9	6.4
Non-minority	9.3	9.4	9.4	9.7	9.4	9.6	7.2	8.4	1.1	1.9	6.5	8.0
**Total-Balance of the SMSA	((25.1))	((25.3))	((20.3))	((20.3))	((21.2))	((21.1))	((15.4))	((17.1))	((2.7))	((7.7))	((17.0))	((18.9))
***Grand Totals[2]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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[2] Totals may not equal 100.0 percent in all cases due to rounding technique.

SAN DIEGO

	Residential (1-4 Family)				Residential Mortgage		Home Imp. Loans		Multi-family			
	Units		Structures								Loans	
	Number	% Total	Number	% Total	# %	Amt. %	# %	Amt. %	Number	% Total	# %	Amt. %
Central City-Older												
Lower Income-Minority	4,731	1.4	4,207	1.3	0.2	0.1	0.3	0.3	367	0.4	1.0	0.4
Mixed	6,270	1.9	4,998	1.5	0.6	0.4	0.4	0.4	6,095	7.7	4.2	2.2
Non-minority	975	0.3	663	0.2	0.1	0.1	—	0.1	2,793	3.5	0.8	0.6
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	13,082	3.9	11,325	3.4	1.4	1.1	1.1	1.1	3,163	4.0	7.1	3.0
Non-minority	18,853	5.6	16,241	4.9	1.7	2.8	1.4	1.8	8,165	10.3	11.6	6.3
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	3,016	0.9	2,708	0.8	0.5	0.4	0.4	0.4	254	0.3	1.1	0.2
Non-minority	4,464	1.3	4,417	1.3	0.9	1.1	0.6	1.1	58	0.1	0.5	0.3
Total-Central City-Older	51,391	15.3	44,559	13.4	6.3	5.9	4.2	5.1	20,095	26.3	26.4	13.8
Central City-Newer												
Lower Income-Minority	1,745	0.5	1,562	0.4	0.1	0.1	0.2	0.2	186	0.2	0.3	0.1
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	9,917	3.0	8,459	2.6	3.1	2.9	1.7	2.2	6,031	7.6	7.0	4.4
Middle Income-Minority	1,788	0.5	1,783	0.5	0.1	0.1	0.6	0.5	420	0.5	0.5	0.3
Mixed	12,481	3.7	12,847	3.9	1.7	1.4	3.0	3.2	2,010	2.5	3.1	1.4
Non-minority	23,806	7.1	21,816	6.6	4.3	4.2	2.1	2.3	13,094	17.5	19.5	15.5
Upper Income-Minority	1,900	0.6	1,877	0.6	0.2	0.1	0.9	0.9	—	—	—	—
Mixed	24,942	7.4	25,879	7.8	7.7	7.9	9.4	9.7	3,072	3.9	1.3	3.7
Non-minority	70,388	21.0	69,846	21.1	31.0	33.3	23.9	31.2	9,918	12.5	5.7	15.0
Total-Central City-Newer	146,967	43.9	144,069	43.5	48.3	50.0	41.8	50.3	35,539	44.7	37.3	40.4
Total Central City	198,358	59.2	188,628	56.9	54.7	55.9	46.0	55.4	56,434	71.0	63.7	54.2
Balance of Urban Area-Older												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	2,306	0.7	2,070	0.6	0.2	0.2	13.4	0.5	994	1.3	0.4	0.1
Non-minority	—	—	—	—	—	—	—	—	—	—	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	3,506	1.1	3,221	1.0	0.3	0.3	0.4	0.3	650	0.8	1.9	2.0
Non-minority	1,585	0.4	1,405	0.4	0.3	0.3	0.1	0.3	338	0.4	0.3	0.1
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	—	—	—	—	—	—	—	—	—	—	—	—
Non-minority	4,427	1.3	3,996	1.2	0.8	0.9	0.6	0.8	959	1.2	1.0	1.2
Total-Balance Urban Area-Older	11,824	3.5	10,692	3.2	1.7	1.7	14.5	1.9	2,941	3.7	3.6	3.4

TABLE 12 Cont'd

SAN DIEGO

	Residential (1-4 Family)				Residential Mortgage		Home Imp. Loans		Multi-family			
	Units		Structures		#	Amt.	#	Amt.	Units		Loans #	Loans Amt.
	Number	% Total	Number	% Total	%	%	%	%	Number	% Total	%	%
Balance of Urban Area-Newer												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	1,127	0.3	1,004	0.3	0.2	0.2	0.1	0.1	138	0.2	0.6	0.3
Non-minority	926	0.3	692	0.2	0.2	0.2	—	—	661	0.8	0.9	0.3
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	14,558	4.4	14,744	4.4	2.7	2.3	2.1	2.1	4,521	5.7	7.1	7.7
Non-minority	9,356	2.8	11,132	3.4	2.3	2.2	1.6	1.5	5,148	6.5	6.8	8.6
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	17,895	5.3	18,499	5.6	3.1	2.6	5.5	5.2	2,251	2.8	3.1	3.9
Non-minority	47,981	14.3	49,853	15.0	14.0	13.9	14.8	16.8	6,280	7.9	11.4	13.9
Total-Balance Urban Area-Newer	91,843	27.4	95,924	28.9	22.4	21.4	24.1	25.6	18,999	23.9	29.9	34.7
Total-Balance of Urban Area	103,667	31.0	106,616	32.1	24.1	23.0	38.6	27.5	21,940	27.6	33.6	38.1
Balance of the San Diego SMSA												
Lower Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	143	—	266	0.1	—	—	—	—	19	—	—	—
Non-minority	1,706	0.5	1,882	0.6	0.1	0.1	0.1	0.1	131	0.2	—	—
Middle Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	1,195	0.4	1,284	0.4	0.8	0.6	0.5	0.4	5	—	0.1	1.2
Non-minority	10,733	3.2	12,675	3.8	5.4	5.1	3.1	3.3	681	0.9	0.8	1.6
Upper Income-Minority	—	—	—	—	—	—	—	—	—	—	—	—
Mixed	6,970	2.1	7,310	2.2	5.5	5.7	4.5	5.0	45	0.1	0.7	3.1
Non-minority	12,037	3.6	12,820	3.9	9.4	9.6	7.2	8.4	237	0.3	1.1	1.9
Total-Balance of the SMSA	32,784	9.8	36,237	11.0	21.2	21.1	15.4	17.1	1,118	1.4	2.7	7.7
Grand totals	334,809	100.0	331,481	100.0	100.0	100.0	100.0	100.0	79,492	100.0	100.0	100.0

CONCLUSION

This study focused on HMDA loan flows in the Buffalo, Chicago, and San Diego SMSAs. Differences existed both within and among the three metropolitan areas with respect to housing stock characteristics and HMDA loan flow patterns.

The bulk of the housing stock in the Buffalo SMSA in 1970 consisted of single-family structures located in non-minority, middle- and upper-income census tracts. Of the three SMSAs studied, the Buffalo SMSA contained the lowest percentage of 1-4 family structures in central city census tracts and the highest percentage of such structures in census tracts located in the balance of the SMSA. Additionally, the Buffalo SMSA claimed the lowest percentage of multi-family units relative to total dwelling units and the oldest housing stock overall among the three SMSAs examined.

The housing stock in the Chicago SMSA differed from that of the other SMSAs in several respects. First, almost 30 percent of the total dwelling units in the Chicago SMSA were classified as "multi-family"--the highest such percentage among the three SMSAs examined. Second, with respect to 1-4 family structures, the Chicago SMSA had a higher owner-occupancy rate than either of the other two SMSAs.

As of the 1970 Census, the San Diego SMSA was characterized by the newest housing stock among the three SMSAs and the highest percentage of single-family structures. Additionally the San Diego SMSA contained the highest percentage of 1-4 family structures in both upper-income census tracts and mixed census tracts. Conversely, the SMSA contained the smallest percentage of 1-4 family structures in lower-income census tracts and non-minority census tracts.

In addition to differences in housing stock characteristics among the SMSAs studied, the three metropolitan areas exhibited different aggregate HMDA loan flow patterns. Based on the survey data analyzed, aggregate HMDA loan flows in the Buffalo SMSA generally paralleled the geographic and demographic distribution of the housing stock contained therein. In the case of the Chicago SMSA, however, the aggregate HMDA loan flows, for the most part, did not mirror the distribution of the SMSA's housing stock. With respect to the San Diego SMSA the results were mixed; the aggregate loan flows paralleled the housing stock distribution in some instances, but diverged in other cases.

Loan flow trends to specific neighborhood-types in each of the three SMSAs also were examined. Again, the results varied greatly both within and among the metropolitan areas analyzed.

Based on the analysis undertaken, several general conclusions emerged from this study. First, analyses of HMDA loan flow patterns for individual SMSAs should include consideration of relevant housing, demographic, and other data. To cite an obvious example, multi-family loan flows should be assessed in the context of multi-family housing data for any given area. Second, the results of the study indicate that, for purposes of analyzing loan flows, each SMSA should be examined separately in view of differences between SMSAs with respect to housing stock characteristics and other factors. Third, the results of the study also demonstrate the need to gather additional housing and demographic data for those SMSAs in which possible distortions in HMDA loan flows exist. Whereas the methodology employed in this study focused on quantitative housing stock characteristics based on the 1970 Census, more recent data, if available, need to be considered. Additionally, attention should be directed to qualitative factors, not examined in this study which might help to explain possible distortions observed with respect to HMDA loan flow patterns.

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

EXECUTIVE SUMMARY

For

Federal Home Loan Bank Board

and

Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
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TABLE OF CONTENTS

Page

INTRODUCTION 1

Purpose 1
Background 1
Scope and Methodology 3

COMPLIANCE ANALYSIS 6

Purpose 6
Scope and Methodology 6
Findings 6

COMPLETENESS 8

Purpose 8
Scope and Methodology 8
Findings 9

DOUBLE COUNTING 12

Purpose 12
Scope and Methodology 12
Findings 13

METHODOLOGY FOR ESTIMATING MORTGAGE DEMAND 15

Purpose 15
Scope and Methodology 15
Findings 15

ACCURACY 17

Purpose 17
Scope and Methodology 17
Findings 19

IMPROVEMENTS IN REGULATIONS AND ENFORCEMENT 22

Purpose 22
Scope and Methodology 22
Revisions to Regulation C 22
Enforcement of the Home Mortgage Disclosure Act 26

TABLE OF CONTENTS (Cont'd)

Page

COST 28

Purpose 28
Scope and Methodology 28
Findings 29

UTILITY: OVERALL STUDY CONCLUSIONS AND RECOMMENDATIONS 32

Purpose 32
Scope and Methodology 32
Major Study Findings and Conclusions 32
Conclusion 34
Recommendations 34

REFERENCES R-1

TABLE 1: Geocoding Accuracy for all Institutions in Buffalo, Chicago, and San Diego 19

TABLE 2: Percentage of Aggregation Errors by Institutions in Three SMSAs 20

TABLE 3: Summary of Suggested Revisions to Regulation C 23

TABLE 4: Summary of Average Costs for Sampled Institutions in Buffalo, San Diego, and Chicago 30

INTRODUCTION

PURPOSE

The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to assist regulatory agencies sponsoring the study in gaining a better understanding of the usefulness, accuracy, and completeness of home mortgage disclosure data, in improving the effectiveness of their enforcement activities and in improving the industries' ability to comply with the Act and Regulation C.

BACKGROUND

The study was conducted for the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation by JRB Associates, Inc., McLean, Virginia, under FHLBB study contract 677040. This study began on September 30, 1977 and was completed in November 1979.

The analysis was initiated as a result of a request of the Senate Committee on Banking and Urban Affairs and is primarily based upon information collected in three Standard Metropolitan Statistical Areas (SMSAs) — San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases:

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 was conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. Phases 2, 3, and 4 were conducted by JRB Associates, Inc.

During the first nine months of the study, JRB Associates performed an extensive analysis in support of the Phase 1 activities associated with the development of "neighborhood" definitions. These definitions were needed to respond to a study requirement originating from the Senate Committee on Banking and Urban Affairs. This requirement was that the mortgage disclosure data collected and processed Phase 1 of the study for each of the three SMSAs be geographically arrayed in accordance with various specified neighborhood categories. The categories were based on the following characteristics: location (i.e. central city remainder of urban area, rest of SMSA) age of housing, minority population, and income. In order to develop meaningful "neighborhood" categories for these variables in each of the three SMSAs, demographic data available at the census tract level for each SMSA were obtained and analyzed in detail. From this analysis, the census tracts were divided into 47 "neighborhood" categories for use in Phase 1 and other parts of the study.

This executive summary is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation[1]
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements[2]

Phase 3 Completeness

- Completeness[3]
- Double Counting[4]
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Mortgage Lending Patterns[5]

Phase 4 Management Reports

- Compliance Analysis[6]
- Cost of Compiling Home Mortgage Disclosure Statements[7]
- Revisions to Regulation C[8]
- Utility of the Home Mortgage Disclosure Act[9]
- Enforcement of the Home Mortgage Disclousre Act[10]
- Methods to Improve Geocoding Accuracy[11]
- Executive Summary

This report presents a brief summary of the methodology, the major conclusions, and the recommendations of the HMDA study. A more detailed summary of the major findings of the study is presented in the companion report, "Utility of the Home Mortgage Disclosure Act."[9] The remaining nine reports present additional discussion and findings from the study.

SCOPE AND METHODOLOGY

The study findings are based primarily on data from the Buffalo, Chicago, and San Diego SMSAs. A random sample of 44 depository institutions in these three SMSAs was selected as the basis for the analysis. The sample of 44 institutions included eight institutions in Buffalo, ten in San Diego, and twenty-six in Chicago. The study findings on the accuracy of mortgage disclosure data are based upon a detailed audit and analysis of the 1977 disclosure statements of these institutions. Also included in the accuracy findings was a discussion of several general problems uncovered in the completeness analysis.

The completeness analysis is based upon data showing the total volume of mortgage lending in each of the three SMSAs. This analysis yielded an estimate of the percentage of the total volume of mortgage lending attributable to depository institutions subject to Federal or state disclosure reporting. This analysis also provided insights into problems resulting from differences between disclosure statements prepared under Regulation C and those prepared under "substantially similar" state laws.

In addition to providing the data needed to conduct the accuracy audits, the sampled depository institutions provided information on the methods used to prepare their disclosure statements, the number of public requests for the data, and the costs associated with preparation of the statements. This information was studied in conjunction with the findings of the accuracy analysis to determine the cost burden to industry, the factors which influence cost and ways in which improvement could be made in Regulation C, compliance examinations and the methodo used by depository institutions to prepare disclosure statements.

Finally, an assessment was made of the usefulness and cost of the mortgage disclosure data, and conclusions were reached regarding the extension of the Act and the steps required to improve the quality and usefulness of home mortgage disclosure data.

Significant challenges were encountered and overcome in the process of obtaining the information required for the study. It was necessary, for example, to obtain descriptive and mortgage loan information for each of the 525 depository institutions subject to disclosure reporting in the three SMSAs. This task was particularly difficult for state-chartered institutions in the Chicago SMSA because state disclosure reporting was discontinued during the study period. These difficulties, however, were overcome through appropriate changes in the study approach and without sacrifice to the study results.

Another potential problem was that the institutions selected for in-depth study were under the jurisdiction of four separate regulatory agencies. These agencies, however, were helpful in obtaining the information needed to assess accuracy, cost, and methods used in the preparation of disclosure statements. Successful completion of the study was also critically dependent upon the cooperation of depository institution personnel without whose efforts data important to the study could not have been obtained. Personnel from the participating depository institutions supported the study efforts fully.

Finally, no attempt had ever been made to acquire and validate complete lending data for an entire county. Thus the acquisition and validation of complete lending data for San Diego County California; Cook County, Illinois; and Erie County, New York was a pioneering process. The experience gained in conducting this study provided considerable insight into both the methods and problems associated with collecting these data and problems associated with compiling disclosure data. These investigative activities and the lessons learned therefrom are described at length in the study reports because they provide a basis for improving the selection criteria for data in disclosure statements, as well as a firmer basis for research of this type in the future.

The scope of those investigations provided the broad base of information needed for a comprehensive assessment of the Home Mortgage Disclosure Act. The sections which follow summarize the findings of the study in the following sequence:

• Compliance Analysis:	Usefulness of the data
• Completeness:	Percentage of mortgage lending shown by disclosure data
• Double Counting:	Extent to which loans sold and purchased were included in two disclosure statements
• Accuracy:	Accuracy of data preparation
• Improvements in Regulations and Enforcement:	Steps necessary to improve the accuracy and usefulness of the data
o Cost:	Cost of disclosure statement preparation and enforcement of HMDA
• Utility:	Overall findings, conclusions, and recommendations.

COMPLIANCE ANALYSIS

PURPOSE

The purpose of the compliance analysis was to determine the extent to which data generated under the Home Mortgage Disclosure Act are useful in determining the compliance of regulated depository institutions with Title VIII of the Civil Rights Act of 1968 (hereafter referred to as Title VIII), the Equal Credit Opportunity Act (ECOA), the Community Reinvestment Act (CRA) and their implementing regulations.

SCOPE AND METHODOLOGY

The content, scope, and limitations of the mortgage disclosure data were compared with the requirements (e.g., the prohibited bases, such as race, sex, age of dwelling) of Title VIII, ECOA, CRA and their implementing regulations. An assessment was made of the extent to which the disclosure of mortgage loans at the census tract level, when used in conjunction with demographic information, are useful in detecting differential patterns of lending that are potentially unlawful. In addition, a limited survey of representatives of the regulatory agencies was conducted to determine the extent to which mortgage disclosure data are being used in compliance examinations and investigations, and to obtain an understanding of the impact on the agencies should the data become unavailable. In response to a survey questionnaire, the depository institutions in the study provided information on the number of requests by the public for the disclosure statements and provided their veiws on the extent to which the data were useful to the public and to themselves.

FINDINGS

The findings of the compliance analysis are as follows:

- The regulatory agencies currently use home mortgage disclosure data as an integral and essential part of their compliance examinations, and investigations and procedures for use differ among various regions and districts.

- Home mortgage disclosure data do provide an alerting mechanism to detect differential patterns of lending among census tracts which may indicate the need for further investigation to determine if an institution has violated certain of the compliance requirements.

- Home mortgage disclosure data used alone do not provide a sufficient basis for determining the compliance of depository institutions with antidiscrimination acts and regulations.

- If mortgage disclosure data were no longer available, an alternative means for obtaining similar data would be needed to support compliance examinations and investigations.

- Mortgage disclosure statements are the only means by which the interested public can review the geographic pattern of mortgage lending by depository institutions.

- The mortgage disclosure statements are being used by public interest and consumer groups in a number of the 270 SMSAs, and these groups believe strongly that these statements are a necessary and valuable tool in identifying and determining redlining and discrimination. However, the full extent of usage by these groups is not clearly defined.

- A significant percentage of the mortgage disclosure statements go unused by individual citizens. Forty percent of the sampled institutions did not receive a single request from a citizen for their 1977 disclosure statement.

COMPLETENESS

PURPOSE

The purpose of the completeness analysis was to estimate the number and amount of residential mortgage loans originated by various types of lenders in Cook County, Illinois; San Diego County, California; and Erie County, New York and to determine the percentage of the total volume attributable to depository institutions subject to Federal or state disclosure reporting.

SCOPE AND METHODOLOGY

Mortgage Disclosure data do not reflect the complete mortgage lending within an SMSA. Those lenders not subject to the reporting requirements of the Home Mortgage Disclosure Act include:

- Depository institutions with assets under $10 million or with no office in an SMSA
- Mortgage bankers
- Miscellaneous companies (e.g., insurance companies)
- Private parties (e.g., seller-financing).

The extent to which these other lenders contribute to lending was studied and is discussed in detail in a study report entitled "Completeness."[3]

The completeness analysis was based upon 1977 residential mortgage lending data obtained for Cook County, Illinois; San Diego County, California; and Erie County, New York. A data base of all calendar year 1977 mortgage loan originations involving a change of property title was obtained for each county. Because these data were derived from the records of the county recorder's office (for San Diego and Erie counties) and from a title company (for Cook County) they include all mortgage loans except those that were assumed or refinanced. Those are not included in the data base because they do not include changes in property title.

In excess of 50 percent of the effort in the completeness analysis was devoted to acquisition, validation, and processing of the large volumes of mortgage loan data for the three counties. In San Diego County 58,903 mortgage loans with a combined value of approximately $3 billion were analyzed. In Erie County 18,021 mortgage loans with a combined value of approximately $426 million were analyzed. In Cook County, 125,307 mortgage loans with a combined value of $4.5 billion were analyzed. These analyses yielded a number of important lessons of interest to those involved in the use and interpretation of information on residential mortgage lending at the county or SMSA level. These findings dealt primarily with the large number of variations in the types of mortgage loans that are originated and the used for explicitly specifing the loan selection criteria to avoid the possibility of significant ambiguities in mortgage loan data bases or disclosure statements.

To the extent that the data for each county would permit, loans were selected from the data base for each county in strict accordance with Regulation C criteria. The Regulation C criteria for inclusion of assumed, refinanced and contruction loans, however were found to be ambiguous. Findings from the accuracy phase of the study indicated that many depository institutions were not reporting these categories of loans in accordance with the intent of Regulation C. Because of these two observations separate study investigation was undertaken for San Diego County using mortgage data from the State of California. The purpose of this study was to assess the impact of inclusion or exclusion of these data from disclosure statements.

Data were obtained from the Department of Housing and Urban Development on the national lending pattern of depository institutions and other lenders in 1977. These data provided a baseline for comparison against the lending patterns within the three counties.

FINDINGS

Findings of four types were derived from the study of completeness. First, quantitative estimates of the volume and percentage of lending in

1977 by various types of lenders were obtained for the nation and derived for the three counties in the study. Second, some of the major reasons for the variations in the lending patterns among the three counties were determined. Third, estimates were made of the volume of mortgage loans that were not disclosed by depository institutions in the three SMSAs because of exemptions due to asset size or location outside of the SMSA. Finally, a number of important lessons were learned during the process of acquiring, validating, and processing mortgage loan data in accordance with Regulation C criteria. These four types of findings are summarized as follows:

- On a national basis, depository institutions (including those not subject to disclosure reporting because of asset size or location) originated approximately 82 percent of the residential mortgage loans in 1977.
- Depository institutions subject to disclosure reporting originated 62. 1. and 87. percent of the mortgage loans in San Diego, Erie, and Cook counties, respectively in 1977 while other lenders originated 37.5, 18.3, and 12. percent respectively.
- The percentage of mortgage loan originations by mortgage companies ranged from 5.3 percent in Cook County to 15.7 percent in San Diego, and the percentage of mortgage loan originations by private parties ranged from 2.8 percent in Cook County to 12.7 percent in San Diego County.
- The mortgage loan originations of depository institutions with no home or branch office within an SMSA or assets less than $10 million ranged from 0. to 2.2 percent of the total dollar volume originated by all depository institutions in each of the three counties and these exemptions do not result in a serious omission in disclosure reporting.
- The percentage of mortgage lending by lenders not subject to disclosure requirements can be significant, and the impact of this lending should be considered when the results of aggregated disclosure statements are being interpreted
- A special investigation of mortgage lending by 34 state-chartered depository institutions in San Diego revealed that together, construction loans, refinance loans and assumed loans in the aggregate accounted for approximately one-third of loans originated by these institutions. Assumed loans were not reported in disclosure statements prepared by the State of California, and depository institutions were generally confused about the criteria under which these three types of loans should be disclosed.

- **Regulation C criteria for inclusion of assumed, refinance, and construction loans in disclosure statements need to be clarified to eliminate major inconsistencies in the way these loans are being disclosed by depository institutions.**

DOUBLE COUNTING

PURPOSE

The purpose of the study of double counting was to estimate the extent to which mortgage loans secured by residential properties in the three SMSAs of the study were doubled counted (i.e., were originated and sold during fiscal year 1977 and were included on the disclosure statements of both the selling [i.e., originating] and the purchasing depository institution in the same SMSA).

SCOPE AND METHODOLOGY

A survey questionnaire was prepared and sent to 413 banks and 63 savings and loan associations located in the Buffalo, Chicago and San Diego SMSAs. The purpose of the questionnaire was to gather information on loans that were sold and purchased among these depository institutions. Responses to the survey were received from 302 banks and 43 savings and loan associations and analyzed to estimate double counting and the extent to which the loans were not included on disclosure statements. Only 13 of the 302 rasponding banks and of the 43 responding savings and loan associations reported sales or purchases of loans with other depository institutions located in the same SMSA. These responses were validated by comparing information from the selling depository institution against information from the purchasing institution, and this validation produced only seven confirmed cases where originations and purchases could be validated while all other cases could not be validated because of lack of responses or inconsistencies in responses. A "worst case" analysis was performed based on the assumption that all of the invalidated sales or purchases were double counted to determino whether the effort required for further validation was warranted. The results of the "worst case" analysis were studied in conjunction with the volume of purchases and originations indicated on disclosure statements and it was concluded that double counting is not a major source of error in aggregating originations and purchases in any of the three SMSAs. Consequently, it was concluded that the expense involved in further validation was not warranted, and the final conclusions on double counting were based on the results of the "worst case" analysis.

The survey data were also studied to determine whether institutions were properly reporting purchased loans and loans that were both originated and sold during the same fiscal year. The only evidence of this type of problem was found for institutions in the Chicago SMSA.

FINDINGS

Both the survey responses and the disclosure statements indicate that the volume of sales and purchases of mortgage loans among depository institutions in the same SMSA is negligible when compared to the total mortgage lending activity. No sales or purchases of mortgage loans were reported by depository institutions in Buffalo either in their disclosure statements or in their survey responses. The depository institutions in San Diego reported in their disclosure statements $40.9 million in purchases of mortgage loans secured by residential real property in San Diego, and our analysis of the survey responses indicates a "worst case" estimate of double counting to be $4.6 million; this amounts to less than 0.2 percent of the total mortgage lending reported in the disclosure statements of these depository institutions.

The federally-chartered depository institutions in Chicago reported mortgage loan purchases of $51.7 million in their disclosure statements, but purchase information was not available in the disclosure reports of the state-chartered institutions. Our analysis of the survey responses indicate a "worst case" estimate of double counting at $163.7 million which is 3.0 percent of the total mortgage lending reported on the disclosure statement of these depository institutions.

Although the volume of sales and purchases of mortgage loans among the depository institutions in Chicago was negligible compared to the total volume of mortgage lending, approximately 50 percent of both the number and the dollar volume of interests in participations were not properly reported on disclosure statements.

The study findings are summarized as follows:

- Double counting is not a major source of error in aggregating originations and purchases to estimate the total mortgage activity in any of the three SMSAs.

- Institutions participating in the survey in the Chicago SMSA did not properly report 50 percent of their purchases of interests in participations from other depository institutions. This volume alone is not a significant source of error in disclosure reporting. This type of improper reporting could, however, be a significant source of error, if these institutions purchased and failed to report properly a large volume of interests in participations from lenders other than depository institutions.

METHODOLOGY FOR ESTIMATING MORTGAGE DEMAND

PURPOSE

The purpose of the part of the study was to develop a methodology for estimating demand for home mortgage credit at the neighborhood (e.g., census tract) level.

SCOPE AND METHODOLOGY

This part of the study was performed by Contract Research Corporation, Belmont, Massachusetts, under subcontract to JRB. The results of their investigation were reported in a research paper, "A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Mortgage Lending Patterns."[5]

Two approaches were considered for estimating demand for home mortgage credit at the neighborhood level. In the first approach, methodologies to estimate a neighborhood' home mortgage credit needs directly were investigated. The basic task followed in this approach is to specify a neighborhood demand function for mortgage credit derived from the demand for housing services (a consumptive good) and the demand for investment in residential real estate in that neighborhood during the time period.

In the second approach, methodologies to determine whether the patterns of home mortgage loan originations in neighborhoods were consistent with the objective risks of delinquency default and foreclosure were investigated. This methodology attempts to dissect the neighborhood lending patterns -- holding risk constant to determine whether illegal borrower and collateral descriptors such as the borrowers race and/or sex and the racial composition of the neighborhood appear to enter the loan decision process in a systematic but (economically) unexplained manner.

FINDINGS

The first approach -- estimating a neighborhood's home credit needs directly -- was rejected because of difficulties in obtaining an appropriate demand function. The conclusion was reached that one "cannot observe the demand for a given bundle of owned housing services (on specific mortgage terms) in different neighborhoods by various household types (described in terms of their incomes, basic shelter needs, and propensity to invest in residential real estate) to determine consumption patterns nor can one observe the relative demand a given household type has for different bundles of rental and owned housing services (at different contract rents and mortgage terms, respectively) in different neighborhoods to determine investment patterns."

The study concluded that it seems "more useful to analyze two observable market parameters namely, the terms of home mortgage credit granted as compared to the incidence and magnitude of loan defaults to determine whether equilibrium mortgage lending patterns by neighborhood are consistent with actual (economic) risks and costs. An Application Activity Model which describes the probability of a mortgage application proving to be successful as a function of borrower, collateral, and loan characteristics was developed. The study pointed out that this model, while conceptually "correct" has a practical drawback, and that it should not be used alone to analyze neighborhood home mortgage lending patterns. The perceived difficulty was that one cannot determine, without an objective measure of loan risk whether institutions are overestimating (or underestimating) the importance of illegal or potentially illegal collateral and borrower characteristics in the loan decision process. Hence, an Equilibrium Market Model was developed to analyze risk, discrimination, and redlining in equilibrium home mortgage lending patterns across neighborhoods by financial institutions. The purpose of this model is to obtain values of "objective risk" that are well grounded on past events and outcomes.

Following a review of the research paper, the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation requested that no further work on this topic be performed.

ACCURACY

PURPOSE

The purpose of this part of the study was to determine the accuracy with which depository institutions in the three study SMSAs prepared their 1977 home mortgage disclosure statements.

SCOPE AND METHODOLOGY

In the accuracy phase of the study, an assessment was made of the two major processes involved in the preparation of a disclosure statement — geocoding and aggregation. Geocoding is the process of assigning census tracts to the addresses of the residential real property securing the residential mortgage loans (or, in the case of home improvement loans, the properties to be improved). Aggregation is the process by which data on mortgage loans (e.g., amount, type of loan, type of property, census tract) are collected, recorded, selected, processed, and reported on disclosure statements. Assessment of the accuracy with which these two processes are performed provides a measure of how accurately the disclosure statements prepared by subject institutions reflect their actual lending patterns.

The accuracy of geocoding was based upon a statistical sample design which provided for the random selection of 14, 15, and 30 sampling units of 50 loans each in the Buffalo, San Diego, and Chicago SMSAs, respectively. The 59 sampling units were randomly selected with replacement in accordance with the number of loans disclosed by each institution in the SMSA; consequently, more than one sampling unit was selected from some institutions. The sampled loans were regeocoded under carefully controlled procedures, and these results were compared with the geocoding results of the depository institutions to determine the number of geocoding errors. This analysis enabled statistically valid estimates to be made of the level of geocoding accuracy achieved by all institutions within each SMSA.

The assessment of aggregation accuracy was more complex than the assessment of geocoding accuracy because of the great variety of ways in which aggregation errors could occur. These errors can be made by: a) including a loan in the wrong census tract line, b) including, in the disclosure statement, a loan not meeting Regulation C criteria, c) including a loan under the wrong "type of loan" or "type of dwelling" column in the disclosure statement or d) incorrect computation. The sampling method used in assessing the accuracy of aggregation entailed the random selection of a sample of census tract lines from the disclosure statements of the 43 depository institutions participating in this part of the study. Fifteen census tract lines were selected for each of the 59 aggregation sampling units and representatives from the examination staff of the regulatory agencies obtained loan data from the files of the depository institutions for the selected census tracts. These data were compared against the data in the disclosure statement to determine the number and amount of errors associated with each census tract line.

The number of aggregation errors and the dollar amount of the aggregation errors found in each sampling unit of 15 census tracts are only meaningful when viewed relative to the overall number and amount of loans that were included in the census tracts. Accordingly, two major indices, expressed as percentages, were used to assess each institution' aggregation error level. The first index is the number of errors made per census tract relative to the number of loans per census tract. The second index is the dollar amount of errors made per census tract relative to the dollar amount of loans per census tract. Some institutions incurred significant error levels on the basis of the number of errors per loan in each census tract, while other institutions incurred significant error levels on the basis of the dollar amounts of error per amount of loans in each census tract.

A judgment was made that error levels in excess of 20 percent, on the basis of either the number or the amount of error, render a disclosure statement too misleading to be considered acceptable. An error level between 10 and 20 percent was judged to render the acceptability of a disclosure statement to be marginal. An error level of less than 10 percent was judged to result in an acceptably accurate disclosure statement.

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FINDINGS

A statisticaly valid estimate of the geocoding accuracy achieved by institutions in each of the three SMSAs is shown in Table 1 in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN BUFFALO, CHICAGO, AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
Mean Percentage of Accuracy	93.16	92.05	82.27
Standard Percentage of Error	1.51	1.49	3.11
95 Percent Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

On the basis of these results, it can be stated with 95 percent confidence, that the level of geocoding accuracy for institutions in Buffalo, San Diego, and Chicago SMSAs lies between 90.2 - 96.1 percent, 89.3 - 95.0 percent, and 76.2 - 88.4 percent, respectively. The levels of geocoding accuracy being achieved in Buffalo and San Diego SMSAs were considered to be acceptable, but the level of geocoding accuracy being achieved in the Chicago SMSA was considered to be marginal.

A further investigation revealed that 35 percent of the institutions in the Chicago SMSA (i.e., 9 of 26 institutions) achieved unacceptable accuracy levels below 80 percent. The accuracy levels of these institutions ranged from 42.5 to 78 percent.

Two reasons account for the low accuracy levels achieved by 9 of the 26 sampled institutions in Chicago. Six of the nine relied solely on census tract maps or other maps to perform geocoding. Such maps, by themselves, are not adequate for geocoding. Three of the nine either did not use address coding guides properly or did not accurately record and maintain the results of their geocoding of addresses to census tracts. Methods to improve geocoding accuracy were developed and these are discussed in the next section.

The results from the aggregation analysis for the three SMSAs are shown in Table 2 in terms of the number and percentage of institutions that were found to be in each of the three error levels. An institution was placed in one of the three error levels in accordance with the higher of its two error levels (i.e., number or amount of errors).

TABLE 2: PERCENTAGE OF AGGREGATION ERRORS BY INSTITUTIONS IN THREE SMSAs

Error Level Per Census Tract	SMSA						TOTAL	
	Buffalo Institutions		San Diego Institutions		Chicago Institutions			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-10 Percent	1	12.5	2	20	2	8	5	11.6
10-20 Percent	3	37.5	3	30	3	12	9	20.9
Greater than 20 Percent	4	50.0	5	50	20	80	29	67.5

Fifty percent of the institutions in the Buffalo and San Diego SMSAs and 80 percent of the institutions in the Chicago SMSA incurred aggregation accuracy error levels greater than 20 percent. The most significant problem was census tract assignment errors caused by aggregating loans into the wrong census tract line. The errors occurred because of inadequacies in the institution's procedures for selecting loans from the files transferring these data to other files and aggregating the data into the disclosure statement. A second significant source of error, particularly with institutions in San Diego, was the inclusion of inappropriate loans (e.g., short-term construction loans) in the disclosure statement.

Although the findings of aggregation accuracy are not based upon a statistically derived sample for the SMSA, nevertheless they do provide strong evidence that many depository institutions are not aggregating the disclosure data accurately. Methods to improve aggregation accuracy were developed and these are discussed in the next section.

The findings on accuracy can be summarized as follows:

- The levels of geocoding accuracy achieved by 35 percent of the institutions in the Chicago SMSA were unacceptably low.
- The levels of aggregation accuracy achieved by 50 percent of the institutions in the Buffalo and San Diego SMSAs and 80 percent of the institutions in the Chicago SMSA were unacceptably low.
- Steps need to taken to identify institutions with unacceptably low levels of geocoding and aggregation accuracy and to raise their accuracy to acceptable levels (see next section).

IMPROVEMENTS IN REGULATIONS AND ENFORCEMENT

PURPOSE

The purpose of this part of the study was to determine ways in which improvements could be made in Regulation C and associated enforcement methods.

SCOPE AND METHODOLOGY

This portion of the study involved the preparation of four reports. These were:

- Revisions to Regulation C[8]
- Enforcement of the Home Mortgage Disclosure Act[10]
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Act Statements[2]
- Methods to Improve Geocoding Accuracy[11]

The information and analysis upon which these reports were based were drawn from all portions of the study. The information and insights obtained during both the accuracy and the completeness analysis were particularly valuable in uncovering the major problem areas associated with Regulation C, the enforcement methods employed by the regulatory agencies, and the methods and procedures used by depository institutions.

REVISIONS TO REGULATION C

The suggested revisions to Regulation C are summarized in Table 3 under four major headings: Preparation of Disclosure Statements; Public Notice, Availability, and Copying; Compiling or Comparing Disclosure Statements; and Complexity of Regulations. The Complexity of Regulations, the fourth major heading in the table, is discussed first because of its impact on suggestions made under the other three headings.

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
PREPARATION OF DISCLOSURE STATEMENTS					
Geocoding (Assigning property addresses to census tracts)	The references to OMB as the source for definitions of SMSA boundaries are now obsolete. The Department of Commerce now has responsibility and authority for definitions of SMSA boundaries.	Yes	Yes	Delete references to OMB and specify the Department of Commerce as the source of definitions for SMSA boundaries.	None
	Regulation C does not address the use of updated definitions of census tracts and their boundaries.	N/A	Yes	Add discussion of the use of the new 1980 census tracts and their boundaries.	Minimal cost for update of geocoding tools.
	Geocoding tools are not defined or discussed.	N/A	No	Include discussion of geocoding methods and tools in Supplementary Guidelines.	None
	No method has been provided for resolving problem addresses in tracted areas.	N/A	Yes	Require that addresses not in geocoding tools be itemized by zip codes.	None
Aggregation (Compiling disclosure statement)	Types of loans that should be excluded are sometimes included even where Regulation C is definitive and explicit.	Yes	Yes	Supplementary Guidelines to clarify loans to be included. Define temporary financing, clarify applicable construction and refinanced loans	Reduce Confusion
	Non-occupant loans are often not also included under at least one other column.	N/A	Yes	Clarify reporting on non-occupant loans; differentiate non-occupant mortgage & home improvement loans.	None
	Aggregation errors: 1) loans in the wrong census tract line 2) including loans not meeting Regulation C criteria 3) designating loans under wrong category 4) incorrect computation.	N/A	N/A	Step-by-step compilation procedures included in Supplementary Guidelines.	None
Audit Trail (Link from loan roster to disclosure statement)	Examiners experience difficulties in tracing aggregated disclosure data back to individual loans.	No	Yes	Require retention of listing of loans included in disclosure statement. Listing to include loan number, census tract, address type of loan and dwelling, amount.	Minimal if data base is automated; moderate change in procedures if manual
PUBLIC NOTICE, AVAILABILITY, AND COPYING					
Public Notice	Requirements for public notice provide for only minimal coverage.	Yes	Yes	Require periodic notices mailed in savings account statements and continuously posted notice in loan department.	Cost of printing notices.
	Posted notice frequently conveys too little information	No	Yes	Specify content of posted notice to designate location of statement and individual to contact.	Cost of printing placards.
Availability	Availability of disclosure statement required at home office and only one branch/location in SMSA, possibly denying reasonable access to public in outlying areas.	Yes	Yes	Require availability of statement at a minimum at all branches required to have CRA report.	Additional duplication costs.
Copying	Regulation C does not specify whether "copying" of statement is manual transcription or photocopying.	No	Yes	Define "copying" to include photocopying if institution makes such services available to its patrons.	None
Certification	It is difficult to determine retrospectively who was responsible for compiling disclosure statement.	No	Yes	Require signature at end of statement, with certification of completeness and accuracy	None
COMPILING OR COMPARING DISCLOSURE STATEMENTS					
Standard Format and Content	Format and content of statements produced by some institutions are substantially different from Regulation C guidelines.	N/A	Yes	Require institutions to prepare statement in standard format.	Minimal except for current state exemptions
Differences in Fiscal Years	Reporting currently required on fiscal year basis. Differences in fiscal years make it difficult to compare statements or generate summary reports that aggregate institutions.	Yes	Yes	Require all institutions to report on a calendar year basis.	Small, unless state-chartered institutions are required by state to report on a fiscal year basis.
State Exemptions	Exemptions have been granted to states whose disclosure statements are substantially different from Regulation C.	No	No	Agencies define "substantially similar" and require strict compliance with definition prior to granting exemption.	Increased difficulty in negotiating state exemptions
COMPLEXITY OF REGULATIONS					
Supplementary Guidelines	Regulation C is complex and is not an adequate basis for an operational procedure.	N/A	N/A	Develop supplementary guidelines that explain the regulations, provide examples, and emphasize points that have been misunderstood in the past.	None

TABLE 3: SUMMARY OF SUGGESTED REVISIONS TO REGULATION C

Complexity of Regulations: It became evident during the study investigations that preparation of a disclosure statement that is consistent with the definitions and requirements of Regulation C entails dozens of decisions and steps, each with a possibility for error. This observation led to the conclusion that depository institutions are unlikely to prepare disclosure statements that are completely consistent with the definitions and requirements of the regulation unless they have and follow carefully prepared written guidelines or instructions. Such guidelines should not be part of Regulation C. Instead, the study suggestion is that supplementary guidelines be prepared and issued to clarify the regulation, explain areas of potential misunderstanding, and provide suggested instructions for preparation of the disclosure statements.

Preparation of the Disclosure Statements: As shown in Table 3, three topics and eight problem areas associated with the preparation of disclosure statements were identified. Four suggestions are made in conjunction with the first topic, geocoding. The first suggestion is to specify the U.S. Department of Commerce as the current source for the definition of SMSA boundaries. The second suggestion is to augment the discussion on the 1970 census tracts with a discussion on the new 1980 census tracts. The third suggestion, relating to the use of improper geocoding tools, derives from problems found in Chicago wherein many institutions were using improper geocoding tools. It is suggested that the use of geocoding tools be addressed in the supplementary guidelines rather than in Regulation C. The fourth suggestion is to revise the regulation to provide that in instances where the available address coding guides or other acceptable geocoding tools do not enable a property address to be geocoded to a census tract, the institutions must either geocode using other means or itemize the loan by the ZIP code of the property address.

Three suggestions are made in conjunction with the second topic, aggregation. The first suggestion is to revise Regulation C to define explicitly the criteria for temporary financing, refinance loans, and assumed loans and, in addition, to amplify these criteria in the supplementary guidelines. These two steps will reduce problems found during the accuracy analysis. The second suggestion addresses two problems associated with the nonoccupant addendum item in the disclosure statement. One problem is that many institutions do not include nonoccupant loans in the other columns, in spite of the fact that Regulation C explicitly requires that this be done. The other problem is the inability to differentiate between non-occupant mortgage loans and nonoccupant home improvement loans. The first problem should be addressed in the supplementary guidelines, and the second requires a revision to the regulation. The final suggestion addresses the problem of aggregation errors. This major accuracy problem should be addressed in the supplementary guidelines and in compliance examinations by a discussion of the types of procedures that are efficient and accurate and those that are not.

An important study finding was that one of the most significant ways in which the quality of mortgage disclosure data could be improved is to revise Regulation C to require depository institutions to maintain a listing of the loans included in the disclosure statement. An accurate and convenient method for identifying the loans comprising a disclosure statement is a prerequisite to the validation of its contents. The suggested listing of loans should be provided in numerical order by census tract, and data for each loan should include the loan number, census tract, type of loan, type of dwelling, property address, and the loan amount. This loan listing is essential to a cost effective examination of the contents of disclosure statements, and the lack of such listings is a factor contributing to the inaccuracies in disclosure statements.

Public Notice, Availability, and Copying: As shown in Table 3, four topics and five problems associated with public notice, availability and copying were identified. Two suggestions associated with public notice are made. The first is to require depository institutions to post a permanent notice regarding the availability of the disclosure statement, and to require periodic notices be mailed in savings account statements. The second is to require the notice to specify the location of the disclosure statement and the responsible institution representative to contact. To improve access to the disclosure statement, it is suggested that it be made available at all branches required to have the CRA statement. It is suggested that copying privileges be clarified, and that institutions be required to provide photocopies (for an optional charge) if these services are normally made available. The final suggestion is to require the responsible individual to certify "to the best of his or her ability" that the disclosure statement is complete and accurate.

Compiling or Comparing Disclosure Statements: As shown in Table 3, three problems associated with the compilation or comparison of disclosure statements were identified. The first suggestion is to require institutions to prepare the disclosure statement in a standard format. Standard disclosure statement formats and contents are the only means by which public citizens, officials, or public interest groups can readily compile and meaningfully interpret the disclosure information for the depository institutions in an SMSA. Standardization of even such seemingly small aspects as rounding to the nearest $1,000 can substantially reduce compilation difficulties. The second suggestion is to require all institutions to report on a calendar year basis. This revision will have little impact on banks and three-fourths of the savings and loan associations that currently have fiscal year closures on December 31. The revision would add a small burden to approximately one-fourth of the savings and loan associations with fiscal closures other than December 31, but the benefits derived from having a common basis for comparison and interpretation appear to outweigh the small added burden. The third suggestion is that in granting exemptions to states, the standard formats and contents specified in Regulation C be required. This would eliminate the existing problem in which the dissimilarities between state and Federal disclosure statements make compilation onerous and interpretation impossible.

ENFORCEMENT OF THE HOME MORTGAGE DISCLOSURE ACT

Implementation of the suggested revisions to Regulation C will improve the ability of the regulatory agencies to enforce the Home Mortgage Disclosure Act. This is because providing the regulated depository institutions with a revised and improved Regulation C and with supplementary guidelines to clarify the potential problem areas will make clear to depository institutions what is required to be reported on disclosure statements. The remaining task is to conduct compliance examinations to ensure that these requirements are being met.

The study findings on the levels of geocoding and aggregation accuracy being achieved by depository institutions indicate the need to implement improved and expanded examination procedures to ensure the accuracy of the disclosure data. Procedures to accomplish this purpose were developed during the study, and these are presented in the companion report, "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements."[2]

The study report suggests procedures which can be used during compliance examinations to assess the accuracy with which institutions geocode property addresses to census tracts and the accuracy with which loan information is aggregated into census tract lines on the disclosure statements.

The suggested geocoding procedures provide a means by which regulatory examiners can either "spot check" the accuracy of geocoding or perform an examination that permits statistically valid statements to be made regarding the level of accuracy achieved by the institution. These suggested procedures also include provisions whereby the institution's geocoding methods would be reviewed and suggestions would be made, where appropriate, to replace poor methods and geocoding tools with better ones.

A second study report assesses the methods currently being used by depository institutions in geocoding residential property addresses to census tracts and suggests methods for improvements. This report, "Methods to Improve Geocoding Accuracy"[11] discusses the major problems found in the geocoding processes studied during the accuracy analysis. The suggestions made in this report can be used to assist examiners in reveiwing the geocoding methods used by depository institutions.

A second set of examination procedures are suggested for assessing the accuracy with which depository institutions aggregate mortgage loan data into their disclosure statements. These suggested examination procedures were derived from the methods that were developed and used to collect and analyze data during the aggregation accuracy analysis. The data required to assess aggregation accuracy during a compliance examination include the institution's disclosure statement; a listing of loans in the disclosure statement that includes, for each loan, the census tract, loan number, type of loan, type of dwelling; and "ground truth" data from the manual or automated loan files. Essentially, the suggested procedures prescribe methods by which examiners can randomly select a sample of census tract lines from the disclosure statement, reconstruct the appropriate data for these, and identify errors made by the institution being examined. Through the use of these procedures the accuracy of mortgage disclosure data can be assessed and, where appropriate, raised to a level wherein the data accurately reflect the lending pattern of the institutions.

The suggested procedures require a more extensive examination than is currently employed, and adoption of these procedures will increase the cost of compliance examinations. Cost findings are summarized in the next section.

COST

PURPOSE

The purpose of this part of the study is to estimate the costs incurred by sampled depository institutions in the preparation and dissemination of home mortgage disclosure statements pursuant to Regulation C or similar state reporting requirements. These data were analyzed to derive estimates of the scope and source of costs associated with disclosure statement preparation. Estimates are also made of the added burden that would be incurred by the regulatory agencies in implementing the examination procedures suggested in this study.

SCOPE AND METHODOLOGY

Questionnaires were sent to 44 depository institutions located in the Buffalo, Chicago, and San Diego SMSAs. These questionnaires requested data on the operational costs associated with disclosure statement preparation incurred by the institutions. Of the 44 institutions studied, eight were located in Buffalo, ten were located in San Diego, and 26 in Chicago. Because the sample institutions were selected randomly for purposes of the Accuracy phase of this study they did not provide a valid statistical basis for extrapolating the cost findings to the entire population of institutions in the three SMSAs or elsewhere. The findings did, however, indicate the range of costs incurred by the 44 depository institutions in the preparation of their 1977 disclosure statements. This range provides a useful indicator of the burden imposed on industry by disclosure reporting.

Based on the insights obtained over the course of the two year study, the cost incurred by the regulatory agencies in enforcing the act was estimated. These estimates were based on calculations of the number of examination hours required to audit the accuracy of an individual disclosure statement.

FINDINGS

The results of the study indicate significant differences in cost associated with disclosure statement preparation among the three SMSAs.

Table 4 shows that the average cost per institution incurred by sampled institutions in the preparation of the 1977 Federal or state disclosure statement was $4,167 in Buffalo, $2,767 in San Diego, and $1,390 in Chicago. The average cost per loan incurred by institutions in the study was $2.09 in Buffalo, $0.99 in San Diego, and $1.45 in Chicago.

TABLE 4: SUMMARY OF AVERAGE COSTS FOR SAMPLED INSTITUTIONS IN BUFFALO, SAN DIEGO, AND CHICAGO

	Buffalo SMSA	San Diego SMSA	Chicago SMSA
Average Cost/Institution	$4,167	$2,767	$1,390
Average Cost/Loan	$2.09	$0.99	$1.45

The cost per loan incurred by these 44 institutions ranged from a low of $0.21 to a high of $13.73. The data indicate that 82 percent of the 44 institutions (i.e., 35 of 44) incurred costs per loan $3.11 or less. Based on the finding of the cost study several conlusions were reached. These are:

1. The 44 study institutions incurred an average cost per loan of $1.42 and a median cost per loan of $1.63.
2. Institutions using reasonably efficient procedures incurred costs per loan in the range of one dollar to four dollars.
3. The 19 study institutions with automated mortgage loan files and with more than ,000 loans in their disclosure statements incurred a cost per loan of $1.36, and their costs acccounted for 88 percent of the loans and 84 percent of the cost.
4. The 13 study institutions with between 200 and 1,000 loans in their disclosure statement incurred a cost per loan of $1.68.
5. The 11 study institutions with less than 200 loans in their disclosure statement incurred a cost per loan of $3.67.

6. Automation is essential to enable institutions with more than 1,000 loans in their disclosure statement to achieve a low cost per loan, but it is not essential for institutions with fewer than 1,000 loans.

7. The cost per loan incurred by institutions with fewer than 1,000 loans is more a function of the efficiency with which a procedure is employed than the type of procedure itself.

8. Institutions with fewer than 200 loans in their disclosure statement incur a greater cost per loan than do institutions with significantly more than 200 loans in their disclosure statement.

9. Most banks incur a greater than average cost per loan because of the smaller number of loans in their disclosure statement and their less efficient methods.

10. An additional annual investment by the regulatory agencies of more than 20 person years of examiner's time is required to conduct the compliance examinations needed to assess the accuracy of home mortgage disclosure data.

UTILITY: OVERALL STUDY CONCLUSIONS AND RECOMMENDATIONS

PURPOSE

The purpose of this part of the study was to assess the overall utility of the Home Mortgage Disclosure Act in terms of its usefulness and cost, to present observations on alternative forms of the Act, and to summarize the major conclusions and recommendations of the study.

SCOPE AND METHODOLOGY

The companion report entitled "Utility of the Home Mortgage Disclosure Act"[9] presents a summary and an assessment of the major findings of the study. The overall usefulness of the current form of mortgage disclosure data is assessed against its cost and conclusions are reached concerning the appropriateness of extending the Home Mortgage Disclosure Act. Also, recommendations are made regarding the steps necessary to improve the quality and usefulness of the data.

A brief discussion is presented on the utility and cost of several alternative forms of the Home Mortgage Disclosure Act. One set of alternatives involves changes in the content of the data disclosed under the Act and the other set of alternatives involves changes in the scope of institutions required to report under the Act Potential changes in the content include the addition of data on 1) demand, 2) deposits 3) aggregate mortgage portfolio, and 4) other types of loans. Potential changes in the scope include extension to institutions in non-SMSA areas and institutions with assets less than $10 million. This discussion is limited to observations based upon insights gained during the course of the study rather than the results of a more rigorous analysis.

MAJOR STUDY FINDINGS AND CONLCUSIONS

The major findings and conclusions of the study are as follows:

1. Home mortgage disclosure data are potentially useful in 1) assessing an institution's lending practices as prescribed

by CRA factors (e) and (i); 2) alerting users to possible discriminatory lending practices based upon the location of the dwelling, and, 3) alerting users to possible discriminatory lending practices related to several other prohibited bases (e.g., race, color, national origin) when geographic patterns for these can be established.

2. Home Mortgage disclosure data are both useful and essential to the regulatory agencies in fulfilling their statutory responsibilities.

3. Home mortgage disclosure data appear to be useful to consumer and public interest groups but the extent of their usage is not well defined.

4. Home mortgage disclosure statements are infrequently requested by individual citizens and seldom used by depository institutions.

5. Home mortgage disclosure statements offer a far from complete picture of total mortgage lending in an SMSA. Depository institutions subject to disclosure reporting can provide as little as 62.5 percent of the total volume of mortgage loans within an SMSA.

6. A significant percentage of home mortgage disclosure statements are too inaccurate to serve their intended purpose.

7. The accuracy of home mortgage disclosure statements can be increased to an acceptable level by a) revising Regulation C to clarify ambiguities in the criteria for including certain types of loans and loan amounts in disclosure statements and to require depository institutions to maintain a loan listing showing data on the loans included in the disclosure statement and b) implementation of the suggested examination procedures for assessing the accuracy of geocoding and aggragation of disclosure data.

8. An additional annual investment of more than 20 person years is required to conduct the compliance examinations needed to assure the accuracy of home mortgage disclosure data.

9. An average cost of $1.42 per each loan in the disclosure statement was incurred by the sampled depository institutions in preparing their 1977 disclosure statements.

10. The annual industry-wide cost incurred by depository institutions in the preparation of their disclosure statements is estimated at $5.8 million based on an assumed cost of $1.42 per loan and 4.08 million loans subject to disclosure.

11. The degree to which both the current and alternative forms of mortgage disclosure data are useful to the public needs to be better defined and the accuracy of the current form of the data needs to be improved before the Act is extended to include alternative forms of data.

CONLUSION

The central conclusion of the study is that the Home Mortgage Disclosure Act should be extended. This conclusion, however, is based on the following four conditions:

- The regulatory agencies will continue making extensive use of the data
- Use of the data by public interest groups and/or the general public is confirmed to be considerable
- The regulatory agencies take appropriate steps to ensure the data disclosed are accurate.
- That Regulation C be revised to require disclosure statement preparation in a standard format and that state exemptions be based upon conformance with the standard format and contents specified in Regulation C.

RECOMMENDATIONS

Given extension of the Home Mortgage Disclosure Act, the following actions are recommended:

- Implementation of suggested revisions to Regulation C
- Implementation by the regulatory agencies of the suggested procedures to assess the accuracy of the mortgage disclosure data prepared by the depository institutions subject to the Act.

REFERENCES

1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Accuracy of Disclosure Statement Preparation," November 1979.

2. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Procedures to Assess the Accuracy of Home Mortgage Disclosure Statement," November 1979.

3. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Completeness," November 1979.

4. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Double Counting," November 1979.

5. Contract Research Corporation, "A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns," submitted February 16, 1979.

6. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Compliance Analysis," November 1979.

7. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Cost of Compiling Home Mortgage Disclosure Statements," November 1979.

8. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Revisions to Regulation C," November 1979.

9. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Utility of the Home Mortgage Disclosure Act," November 1979.

10. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Enforcement of the Home Mortgage Disclosure Act," November 1979.

11. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas — Methods to Improve Geocoding Accuracy," November 1979.

PROJECT SUMMARY REPORT

Prepared For

Federal Home Loan Bank Board
Federal Deposit Insurance Corporation

In Partial Fulfillment of the Requirements
of the FHLBB Contract #677043

June 1979

RESOURCE CONSULTANTS, INC.
730 E. Highland Avenue
Phoenix, Arizona 85014

FOREWORD

This report was written by Resource Consultants, Inc., Phoenix, Arizona for the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation in partial fulfillment of FHLBB Contract [illegible].

The purpose of this project was to collect and evaluate Home Mortgage Disclosure statements prepared by financial institutions in three standard metropolitan statistical areas (SMSAs); Buffalo, NY; Chicago, IL; and San Diego, CA. The evaluation portion of the project included an analysis of the Home Mortgage Disclosure Act and Regulation C, the processes used to compile the statements required by the Act, and the usefulness of the statements. Project work started on September 30, 1977, and was completed in early 1979. The work included four phases and was performed by two contractors.

Resource Consultants, Inc., was responsible for Phase 1: Developing the Home Mortgage Disclosure Reporting System, collecting and processing disclosure statements from the three SMSAs, and writing four projects reports:

.Recommendations for Changes to HMDA Reporting Regulations

.Costs of Processing HMDA Statements on a Periodic Basis

.Description of the Senate Banking Committee Report

.Project Summary Report

JRB Associates, Inc., McLean, Virginia, is responsible for Phase 2 (Accuracy), Phase 3 (Completeness), and Phase 4 (Management Reports).

Since this report deals with HMDA statements prepared to conform with the requirements of the Home Mortgage Disclosure Act, it is suggested that the reader study the Act and Regulation C, giving special attention to the definitions of terms provided in both documents.

All statistics used in the preparation of this report were developed as a by-product of the Home Mortgage Disclosure Reporting System.

TABLE OF CONTENTS

FOREWORD

I. MANAGEMENT SUMMARY 1

II. SUMMARY OF TASKS PERFORMED 2

- A. Introduction 2
- B. Task 0 Project Management 2
- C. Task 1 HMDA System Development 2
- D. Task 2 System Data Files 3
- E. Task 3 Conduct System Tests 3
- F. Task 4 HMDA Data Collection 3
- G. Task 5 Senate Banking Committee Report 4
- H. Task 6 Management Report 4
- I. Task 7 JRB Coordination 4
- J. Task 8 Project Progress Meetings 4

5-31-79

MANAGEMENT SUMMARY

This report presents a summary of the tasks accomplished by Resource Consultants, Inc., during the HMDA Study Project.

In general all major tasks were completed within the originally anticipated time frame. The completion of HMDA statement processing extended beyond the time originally scheduled, which resulted in a delay in producing the final management reports. The delays encountered however, provided valuable insight into the process of collecting HMDA data.

In our opinion, work on this project progressed very well, due in part to the excellent cooperation received from Mr. Robert Warwick and his successor, Mr. Richard Tucker of the FHLBB, and Dr. William R. Watson of the FDIC. We particularly commend the diligent assistance and guidance rendered throughout the project by Mr. Robert Gibbons and his staff, particularly Mr. Wally Miller. Without their efforts our work would have proven much more difficult.

6-31-79

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A. Introduction

Resource Consultants, Inc.'s contract for work on the HMDA Study Project was divided into the following tasks:

Task Number	Task Description
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2	System Data Files
3	Conduct System Tests
4	HMDA Data Collection
5	Senate Baking Committee Report
6	Management Reports
7	JRB Coordination
8	Project Progress Meeting

The following paragraphs summarize the performance of each of these project tasks.

B. Task 0 Project Management

The Project Management task included a continuous scheduling effort, bi-weekly progress reporting, technical and status review meetings with FHLBB and FDIC staff members and the coordination of all other project task work. This task was active from the start of project work on October 1, 1977 to project completion on July 30, 1979.

C. Task 1 HMDA System Development

This task included the development and programming of the HMDA Reporting System for the FHLBB computer. The work was completed in the following stages:

- The System Requirements Manual was completed and delivered to the FHLBB on November 16, 1977 along with a management briefing.
- Delivery of the System Specification Manual was made on January 9, 1978. Revisions to system run diagrams were delivered January 28 to comply with FHLBB specification refinements. Final system specification revisions were completed and written approval of specifications was received on February 4, 1978.

[illegible]

G. Task 5 Senate Banking Committee Report

One of three major management reports written by RCI, this report described the data classifications and content of the data tabulations produced by the HMDA Reporting System for the Senate Banking Committee. This management report was completed in draft form on April 18, 1979, and following FHLBF and FDIC comment, was submitted in final form on July 31, 1979.

H. Task 6 Management Reports

Three management level reports were produced under this task:

- .Recommendations for Changes to HMDA Reporting Regulations
- .Costs of Processing HMDA Statements on a Periodic Basis
- .Project Summary Report

These reports were based on our experience gained during the processing of HMDA statements for the three study SMSAs, and on the statistical data produced by the HMDA Processing System. Drafts of the reports were submitted for comment on April 18, 1979, and final reports were delivered on July 31, 1979.

I. Task 7 JRB Coordination

Due to the complex nature of the study project, substantial coordination was required between RCI and JRB Associates, Inc., the other study contractor. This was accomplished throughout the duration of the project via meetings in McLean, VA and Phoenix, correspondence, and telephone communication. The RCI project staff received a very high level of cooperation from the JRB Project Manager, Mr. James E. Russell, and his staff. This cooperation contributed significantly to the timely, successfull completion of the work.

J. Task 8 Project Progress Meetings

The FHLBB and FDIC conducted several progress meetings during the initial phases of the study. The meetings were attended by the contractors, agency representatives, congressional staff and interested consumer advocates. Substantial communication and an understanding of problems faced by contractors and agencies resulted from the meetings.

DESCRIPTION OF THE
SENATE BANKING COMMITTEE REPORT

Prepared For

Federal Home Loan Bank Board
Federal Deposit Insurance Corporation

In Partial Fulfillment of the Requirements
of the FHLBB Contract #677043

June 1979

RESOURCE CONSULTANTS, INC.
730 E. Highland Avenue
Phoenix, Arizona 85014

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All statistics used in the preparation of this report were developed as a by-product of the Home Mortgage Disclosure Reporting System.

TABLE OF CONTENTS

FOREWORD

I. MANAGEMENT SUMMARY 1

II. DESCRIPTION OF THE REPORT 2

A. General Description 2

B. Categories of Data 2

C. Data Tabulated 6

III. INTERPRETATION OF THE REPORT 8

A. General Comments on Interpretation 8

B. Levels of Institutional Participation in The Study 10

C. Possible Sources of Error 10

5-31-79

[illegible]

[illegible] for an SMSA is [illegible] Report, organized [illegible] the SMSA, age of [illegible] of [illegible] data as [illegible] numbers and dollar [illegible] categories and [illegible] Report are [illegible]

[illegible] interpretation [illegible] errors, [illegible] institutions [illegible]

I. DESCRIPTION OF THE REPORT

A. General Description

The Senate Banking Committee Report is a two page tabulation of Selected Home Mortgage Disclosure Act (HMDA) and 1970 census data for a specified Standard Metropolitan Statistical Area (SMSA). Figure II-1 presents an example of the Senate Banking Committee Report for the study project 1977 fiscal year period.

The Report is produced by the HMDA Reporting System using data that originate from HMDA statements prepared by financial institutions in the SMSA. These data, after careful editing and summarization, are combined with Census Bureau demographic data to produce the reports.

HMDA data are organized into a total of 47 categories within the report. Each category has associated with it housing and loan data for both 1-4 family and multi-family housing.

B. Categories of Data

The reports are organized into categories reflecting four major classifications of data; location within the SMSA, age of housing stock, income, and minority status of residents. Each of these classifications are further divided as follows:

1. Location Within SMSA

Each census tract within the SMSA is first assigned to one of four location categories: Central City, Remainder of Urban Area, Balance of SMSA, and Not Classified.

- Central City--the contiguous census tracts which comprise the core city (i.e., city for which the SMSA is named) of the SMSA as defined by the Bureau of the Census. For Buffalo and San Diego, this area corresponds to the census tracts contained (wholly or partially) within the corporate limits of the aforementioned cities; for the Chicago SMSA, this area is somewhat more extensive than the corporate limits of the city of Chicago. The Central City tracts included in this category for the HMDA Study Project were furnished by the FHLBB.

PREPARED 02/05/79 10.39

HMDA REPORTING SYSTEM 1977
NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320 SAN DIEGO, CA

REPORT HMD90J
PROGRAM HMD090

PAGE 1

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN		NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY/OWNER OCC. NO. LOANS	1-4 FAMILY/OWNER OCC. AMT($000)
CENTRAL CITY - OLDER:							
LOWER INCOME:	MINORITY	367	4,731	17	1,428	83	2,096
	MIXED	6,095	6,270	69	8,988	217	7,187
	NON-MINORITY	2,793	975	14	2,514	24	1,390
MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	3,163	13,082	118	15,463	541	21,425
	NON-MINORITY	8,165	18,853	191	25,951	1,038	56,701
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	254	3,016	18	994	196	8,508
	NON-MINORITY	58	4,464	9	1,237	366	21,308
* TOTAL - CENTRAL CITY - OLDER:		20,895	51,391	436	56,575	2,465	118,615
CENTRAL CITY - NEWER:							
LOWER INCOME:	MINORITY	186	1,745	5	506	55	1,342
	MIXED	0	0	0	0	0	0
	NON-MINORITY	6,031	9,917	115	18,125	1,217	59,487
MIDDLE INCOME:	MINORITY	420	1,788	8	1,283	53	1,396
	MIXED	2,018	12,481	51	5,600	641	27,999
	NON-MINORITY	13,894	23,806	322	63,806	1,670	84,546
UPPER INCOME:	MINORITY	0	1,900	0	0	71	2,208
	MIXED	3,072	24,942	22	15,283	2,994	159,662
	NON-MINORITY	9,918	70,388	94	61,552	12,040	670,498
* TOTAL - CENTRAL CITY - NEWER:		35,539	146,967	617	166,155	18,741	1,007,138
** TOTAL - CENTRAL CITY:		56,434	198,358	1,053	222,730	21,206	1,125,753
BALANCE OF URBAN AREA - OLDER:							
LOWER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	994	2,306	7	592	97	3,412
	NON-MINORITY	0	0	0	0	0	0
MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	650	3,506	32	8,154	127	5,553
	NON-MINORITY	338	1,585	5	515	104	6,050
UPPER INCOME:	MINORITY	0	0	0	0	0	0
	MIXED	0	0	0	0	0	0
	NON-MINORITY	959	4,427	17	4,706	316	18,302
* TOTAL - BAL URBAN AREA - OLDER:		2,941	11,824	61	13,967	644	33,317

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PREPARED 02/05/79  10.39                        HMDA REPORTING SYSTEM 1977                       REPORT  HMD90J         PAGE 2
                                  NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320  SAN DIEGO, CA      PROGRAM HMD090

     LOCATION OF PROPERTY               NO. OF HOUSING UNITS      MULTI-FAMILY PROPERTY        1-4 FAMILY/OWNER OCC.
   SECURED BY MORTGAGE LOAN            MULTI-FAMILY  1-4 FAMILY    NO. LOANS  AMT($000)         NO. LOANS  AMT($000)
--------------------------------       ------------  ----------   ---------- ----------        ---------- ----------


BALANCE OF URBAN AREA - NEWEP:
     LOWER INCOME:    MINORITY                    0          0             0          0                 0          0
                      MIXED                     138      1,127            10      1,412                73      3,051
                      NON-MINORITY              661        926            14      1,328                85      4,571
     MIDDLE INCOME:   MINORITY                    0          0             0          0                 0          0
                      MIXED                   4,521     14,558           118     31,436             1,029     46,775
                      NON-MINORITY            5,148      9,356           112     35,249               881     43,727
     UPPER INCOME:    MINORITY                    0          0             0          0                 0          0
                      MIXED                   2,251     17,895            52     16,098             1,200     52,593
                      NON-MINORITY            6,280     47,981           189     56,908             5,441    280,486

* TOTAL - BAL URBAN AREA - NEWEN:            18,999     91,843           495    142,431             8,709    431,203

** TOTAL - BALANCE OF URBAN AREA:            21,940    103,667           556    156,398             9,353    464,520

BALANCE OF THE SMSA:
     LOWER INCOME:    MINORITY                    0          0             0          0                 0          0
                      MIXED                      19        143             0          0                 2         81
                      NON-MINORITY              131      1,706             0          0                49      1,973
     MIDDLE INCOME:   MINORITY                    0          0             0          0                 0          0
                      MIXED                       5      1,195             2      4,991               330     11,205
                      NON-MINORITY              681     10,733            13      6,628             2,098    102,488
     UPPER INCOME:    MINORITY                    0          0             0          0                 0          0
                      MIXED                      45      6,970            12     12,560             2,123    114,960
                      NON-MINORITY              237     12,037            18      7,617             3,633    194,381

* TOTAL - BALANCE OF THE SMSA:                1,118     32,784            45     31,796             8,235    425,088

* TOTAL - OUTSIDE OF THE SMSA:             --- NOT APPLICABLE ---      2,635    242,099            16,068    893,984

* TOTAL - NOT CLASSIFIED:                     1,243     11,978            54     14,657             2,058    149,241
------------------------------------------------------------------------------------------------------------------------

*** G R A N D   T O T A L S ***              30,735    346,787         4,343    667,680            57,520  3,058,586
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- Remainder of Urban Area--all census tracts (not necessarily contiguous) within the SMSA that are not contained in the Central City and which have a housing density of 400 or more units per square mile. Assuming slightly more than three persons per household, this approximates the 1,000 persons per square mile definition used by the Bureau of the Census.

- Balance of SMSA--all census tracts within the SMSA not meeting the criteria enumerated in (1) or (2) above.

- Not Classified--all census tracts not included in the Central City lists furnished by the FHLBB and for which either housing unit or tract area data were not available.

2. Age of Housing Stock

After census tracts have been assigned to one of the first three location groups, each tract is further subdivided based on the median age of its housing stock as obtained from 1970 census data. The following categories are used:

- Older--A census tract where the median construction date of the housing stock is 1949 or before (i.e., the median age of the housing stock is 28 years or older, in 1977).

- Newer Neighborhood--A census tract where the median age of the housing stock is 27 years or newer.

3. Income of Residents

Each of the six subdivisions of the SMSA's census tracts made using location and age of housing stock is again subdivided using the income of the residents of each tract. The median income for families and unrelated individuals was computed for each tract using 1970 census data. The median income for each tract was then compared to that of the SMSA and the tracts were classified as follows:

- Lower Income--tracts where the median income is less than 80% of the SMSA median income.

- Middle Income--tracts where the median income is 80% to 120% of the SMSA median income.

- Upper Income--tracts whose median income exceeds 120% of the SMSA median income.

4. Minority Composition of Census Tracts

The final subdivision of census tracts used in producing the report categories is Resident Minority Status. This status is based on the Race of Head of Household as reported in the 1970 census, and includes Black and Spanish American (only) as minorities. The tract was classified by computing the percent of minority heads of household of all heads of households, then assigning categories as follows:

- Minority--greater than 75% minority heads of household.
- Mixed--over 10% but less than 75% minority heads of household.
- Non-Minority--less than 10% minority heads of household.

5. Outside of SMSA

The HMDA statement format suggested in Federal Reserve Board Regulation C provides a space for the total mortgages made outside the relevant SMSA. The Senate Banking Committee Report format includes these data where available as "Total - Outside of SMSA".

- Data Tabulated

Six data items are tabulated for each of the 47 categories of census tracts included in the report. These data include base housing counts obtained from the 1970 census, and the actual loan counts and dollar volume from the HMDA statements for 1-4 and multi-family housing.

1. Number of Housing Units

Two counts of housing units were derived from the 1970 census for all tracts in each category; multi-family and 1-4 family units. Note that these counts include both rental and owner occupied and vacant housing units (not structures).

6-31-79

I. MANAGEMENT SUMMARY

This report presents a summary of the tasks accomplished by Resource Consultants, Inc., during the HMDA Study Project.

In general all major tasks were completed within the originally anticipated time frame. The completion of HMDA statement processing extended beyond the time originally scheduled, which resulted in a delay in producing the final management reports. The delays encountered however, provided valuable insight into the process of collecting HMDA data.

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6-31-79

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A. Introduction

Resource Consultants, Inc.'s contract for work on the HMDA Study Project was divided into the following tasks:

Task Number	Task Description
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2	System Data Files
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4	HMDA Data Collection
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6	Management Reports
7	JRB Coordination
8	Project Progress Meeting

The following paragraphs summarize the performance of each of these project tasks.

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This task included the development and programming of the HMDA Reporting System for the FHLBB computer. The work was completed in the following stages:

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- System programming was completed by May 27, 1978.
- Final system documentation manuals were delivered to the FHLBB on July 11, 1978.

Considering the complex nature of HMDA statement processing requirements, the efficient and timely completion of this task was materially aided by the timely cooperation of the FHLBB's Information Systems Division Staff.

D. **Task 2 System Data Files**

The system requirements included furnishing several data files for use in controlling the processing of HMDA statements as well as preparing the final reports. During this task, census data files were obtained and processed, geographic data files were constructed and edited, and demographic catagories were constructed for use with the Senate Banking Committee Report.

All Task 2 work was completed prior to the scheduled time for incorporation into the HMDA Reporting System.

E. **Task 3 Conduct System Tests**

Formal system tests were developed and specified in the System Test Plan, which was delivered in revised form on January 27, 1978. The formal system tests were conducted jointly by the FHLBB and RCI June 6th and 7th. On June 8, 1978 the FHLBB gave formal approval for the processing of HMDA statements using the HMDA Reporting System.

F. **Task 4 HMDA Data Collection**

HMDA statements from the three study SMSAs were obtained by the FHLBB and FDIC, and were then sent to RCI for processing through the HMDA Reporting System. The first documents were received by RCI in eaarly May, 1978 and processing was started immediately. Documents were received for processing through the end of December 1978. Correction and replacement of documents received continued until early April 1979, with the final SMSA reports being produced on April 11, 1979.

The collection effort included 671 institutions in the three study SMSAs. 578 institutions' reports were received, and usable data was obtained for 510 institutions. A total of 52,595 census tract lines of data were processed of which 48,161 were valid for use in the final reports.

G. Task 5 Senate Banking Committee Report
One of three major management reports written by RCI, this report described the data classifications and content of the data tabulations produced by the HMDA Reporting System for the Senate Banking Committee. This management report was completed in draft form on April 18, 1979, and following FHLBF and FDIC comment, was submitted in final form on July 31, 1979.

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The FHLBB and FDIC conducted several progress meetings during the initial phases of the study. The meetings were attended by the contractors, agency representatives, congressional staff and interested consumer advocates. Substantial communication and an understanding of problems faced by contractors and agencies resulted from the meetings.

DESCRIPTION OF THE
SENATE BANKING COMMITTEE REPORT

Prepared For

Federal Home Loan Bank Board
Federal Deposit Insurance Corporation

In Partial Fulfillment of the Requirements
of the FHLBB Contract #677043

June 1979

RESOURCE CONSULTANTS, INC.
730 E. Highland Avenue
Phoenix, Arizona 85014

FOREWORD

This report was written by Resource Consultants, Inc., Phoenix, Arizona, for the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation in partial fulfillment of FHLBB Contract 677043.

The purpose of this project was to collect and evaluate Home Mortgage Disclosure statements prepared by financial institutions in three standard metropolitan statistical areas (SMSAs); Buffalo, NY; Chicago, IL; and San Diego, CA. The evaluation portion of the project included an analysis of the Home Mortgage Disclosure Act and Regulation C, the processes used to compile the statements required by the Act, and the usefulness of the statements. Project work started on September 30, 1977, and was completed in early 1979. The work included four phases and was performed by two contractors.

Resource Consultants, Inc., was responsible for Phase 1: Developing the Home Mortgage Disclosure Reporting System, collecting and processing disclosure statements from the three SMSAs, and writing four projects reports:

.Recommendations for Changes to HMDA Reporting Regulations

.Costs of Processing HMDA Statements on a Periodic Basis

.Description of the Senate Banking Committee Report

.Project Summary Report

JRB Associates, Inc., McLean, Virginia, is responsible for Phase 2 (Accuracy), Phase 3 (Completeness), and Phase 4 (Management Reports).

Since this report deals with HMDA statements prepared to conform with the requirements of the Home Mortgage Disclosure Act, it is suggested that the reader study the Act and Regulation C, giving special attention to the definitions of terms provided in both documents.

All statistics used in the preparation of this report were developed as a by-product of the Home Mortgage Disclosure Reporting System.

TABLE OF CONTENTS

FOREWORD

I. MANAGEMENT SUMMARY 1

II. DESCRIPTION OF THE REPORT 2

A. General Description 2

B. Categories of Data 2

C. Data Tabulated 6

III. INTERPRETATION OF THE REPORT 8

A. General Comments on Interpretation 8

B. Levels of Institutional Participation in The Study 10

C. Possible Sources of Error 10

6-31-79

I. MANAGEMENT SUMMARY

Selected Home Mortgage Disclosure Act Data for an SMSA is presented in the Senate Banking Committee Report, organized in 47 categories based on location within the SMSA, age of housing stock, resident income, and concentration of minorities. The report includes baseline housing data as well as multi-family and 1-4 family loan numbers and dollar volume for each reporting category. All categories and data included in the Senate Banking Committee Report are explained.

Part III of the report includes comments on interpretation of data presented, a short discussion of possible errors, and a summary of the response by HMDA institutions represented by the data reported.

6-31-79

I. DESCRIPTION OF THE REPORT

A. General Description

The Senate Banking Committee Report is a two page tabulation of Selected Home Mortgage Disclosure Act (HMDA) and 1970 census data for a specified Standard Metropolitan Statistical Area (SMSA). Figure II-1 presents an example of the Senate Banking Committee Report for the study project 1977 fiscal year period.

The Report is produced by the HMDA Reporting System using data that originate from HMDA statements prepared by financial institutions in the SMSA. These data, after careful editing and summarization, are combined with Census Bureau demographic data to produce the reports.

HMDA data are organized into a total of 47 categories within the report. Each category has associated with it housing and loan data for both 1-4 family and multi-family housing.

B. Categories of Data

The reports are organized into categories reflecting four major classifications of data; location within the SMSA, age of housing stock, income, and minority status of residents. Each of these classifications are further divided as follows:

1. Location Within SMSA

Each census tract within the SMSA is first assigned to one of four location categories: Central City, Remainder of Urban Area, Balance of SMSA, and Not Classified.

- Central City--the contiguous census tracts which comprise the core city (i.e., city for which the SMSA is named) of the SMSA as defined by the Bureau of the Census. For Buffalo and San Diego, this area corresponds to the census tracts contained (wholly or partially) within the corporate limits of the aforementioned cities; for the Chicago SMSA, this area is somewhat more extensive than the corporate limits of the city of Chicago. The Central City tracts included in this category for the HMDA Study Project were furnished by the FHLBB.

PREPARED 02/05/79 10.33

HMDA REPORTING SYSTEM 1977
NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320 SAN DIEGO, CA

REPORT HMD90J
PROGRAM HMD090

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN			NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY/OWNER OCC. NO. LOANS	1-4 FAMILY/OWNER OCC. AMT($000)
CENTRAL CITY - OLDER:								
	LOWER INCOME:	MINORITY	367	4,731	17	1,428	83	2,096
		MIXED	6,095	6,270	69	8,988	217	7,187
		NON-MINORITY	2,793	975	14	2,514	24	1,390
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	3,163	13,082	118	15,463	541	21,425
		NON-MINORITY	8,165	18,853	191	25,951	1,038	56,701
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	254	3,016	18	994	196	8,508
		NON-MINORITY	58	4,464	9	1,237	366	21,308
* TOTAL - CENTRAL CITY - OLDER:			20,895	51,391	436	56,575	2,465	118,615
CENTRAL CITY - NEWER:								
	LOWER INCOME:	MINORITY	186	1,745	5	506	55	1,342
		MIXED	0	0	0	0	0	0
		NON-MINORITY	6,031	9,917	115	18,125	1,217	59,487
	MIDDLE INCOME:	MINORITY	420	1,788	8	1,283	53	1,396
		MIXED	2,018	12,481	51	5,600	641	27,999
		NON-MINORITY	13,894	23,806	322	63,806	1,670	84,546
	UPPER INCOME:	MINORITY	0	1,900	0	0	71	2,208
		MIXED	3,072	24,942	22	15,283	2,994	159,662
		NON-MINORITY	9,918	70,388	94	61,552	12,040	670,498
* TOTAL - CENTRAL CITY - NEWER:			35,539	146,967	617	166,155	18,741	1,007,138
** TOTAL - CENTRAL CITY:			56,434	198,358	1,053	222,730	21,206	1,125,753
BALANCE OF URBAN AREA - OLDER:								
	LOWER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	994	2,306	7	592	97	3,412
		NON-MINORITY	0	0	0	0	0	0
	MIDDLE INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	650	3,506	32	8,154	127	5,553
		NON-MINORITY	338	1,585	5	515	104	6,050
	UPPER INCOME:	MINORITY	0	0	0	0	0	0
		MIXED	0	0	0	0	0	0
		NON-MINORITY	959	4,427	17	4,706	316	18,302
* TOTAL - BAL. URBAN AREA - OLDER:			2,941	11,824	61	13,967	644	33,317

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PREPARED 02/05/79  10.39                    HMDA REPORTING SYSTEM 1977                          REPORT  HMD90J        PAGE 2
                                  NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320  SAN DIEGO, CA        PROGRAM HMD090

     LOCATION OF PROPERTY              NO. OF HOUSING UNITS       MULTI-FAMILY PROPERTY         1-4 FAMILY/OWNER OCC.
    SECURED BY MORTGAGE LOAN         MULTI-FAMILY  1-4 FAMILY     NO. LOANS  AMT($000)         NO. LOANS  AMT($000)
--------------------------------     ------------  ----------    ---------- -----------       ---------- -----------


BALANCE OF URBAN AREA - NEWER:
     LOWER INCOME:    MINORITY                  0           0             0           0                0           0
                      MIXED                   138       1,127            10       1,412               73       3,051
                      NON-MINORITY            661         926            14       1,328               85       4,571
     MIDDLE INCOME:   MINORITY                  0           0             0           0                0           0
                      MIXED                 4,521      14,558           118      31,436            1,029      46,775
                      NON-MINORITY          5,148       9,356           112      35,249              881      43,727
     UPPER INCOME:    MINORITY                  0           0             0           0                0           0
                      MIXED                 2,251      17,895            52      16,098            1,200      52,593
                      NON-MINORITY          6,280      47,981           189      56,908            5,441     280,486

* TOTAL - BAL URBAN AREA - NEWER:          18,999      91,843           495     142,431            8,709     431,203

** TOTAL - BALANCE OF URBAN AREA:          21,940     103,667           556     156,398            9,353     464,520

BALANCE OF THE SMSA:
     LOWER INCOME:    MINORITY                  0           0             0           0                0           0
                      MIXED                    19         143             0           0                2          81
                      NON-MINORITY            131       1,706             0           0               49       1,973
     MIDDLE INCOME:   MINORITY                  0           0             0           0                0           0
                      MIXED                     5       1,195             2       4,991              330      11,205
                      NON-MINORITY            681      10,733            13       6,628            2,098     102,488
     UPPER INCOME:    MINORITY                  0           0             0           0                0           0
                      MIXED                    45       6,970            12      12,560            2,123     114,960
                      NON-MINORITY            237      12,037            18       7,617            3,633     194,381

* TOTAL - BALANCE OF THE SMSA:              1,118      32,784            45      31,796            8,235     425,088

* TOTAL - OUTSIDE OF THE SMSA:           --- NOT APPLICABLE ---       2,635     242,099           16,068     893,984

* TOTAL - NOT CLASSIFIED:                   1,243      11,978            54      14,657            2,658     149,241
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*** G R A N D   T O T A L S ***            30,735     346,787         4,343     667,680           57,520   3,058,586
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Remainder of Urban Area--all census tracts not necessarily contiguous within the SMSA that are not contained in the Central City and which have a housing density of 400 or more units per square mile. Assuming slightly more than three persons per household, this approximates the 1,000 persons per square mile definition used by the Bureau of the Census.

- Balance of SMSA--all census tracts within the SMSA not meeting the criteria enumerated in 1. or 2. above.

- Not Classified--all census tracts not included in the Central City lists furnished by the FHLBB and for which either housing unit or tract area data were not available.

2. Age of Housing Stock

After census tracts have been assigned to one of the first three location groups, each tract is further subdivided based on the median age of its housing stock as obtained from 1970 census data. The following categories are used:

- Older--A census tract where the median construction date of the housing stock is 1949 or before (i.e., the median age of the housing stock is 28 years or older, in 1977).

- Newer Neighborhood--A census tract where the median age of the housing stock is 27 years or newer.

3. Income of Residents

Each of the six subdivisions of the SMSA's census tracts made using location and age of housing stock is again subdivided using the income of the residents of each tract. The median income for families and unrelated individuals was computed for each tract using 1970 census data. The median income for each tract was then compared to that of the SMSA and the tracts were classified as follows:

- Lower Income--tracts where the median income is less than 80% of the SMSA median income.

- Middle Income--tracts where the median income is 80% to 120% of the SMSA median income.

- Upper Income--tracts whose median income exceeds 120% of the SMSA median income.

4. Minority Composition of Census Tracts

The final subdivision of census tracts used in producing the report categories is Resident Minority Status. This status is based on the Race of Head of Household as reported in the 1970 census, and includes Black and Spanish American (only) as minorities. The tract was classified by computing the percent of minority heads of household of all heads of households, then assigning categories as follows:

- Minority--greater than 75% minority heads of household.
- Mixed--over 10% but less than 75% minority heads of household.
- Non-Minority--less than 10% minority heads of household.

5. Outside of SMSA

The HMDA statement format suggested in Federal Reserve Board Regulation C provides a space for the total mortgages made outside the relevant SMSA. The Senate Banking Committee Report format includes these data where available as "Total - Outside of SMSA".

C. Data Tabulated

Six data items are tabulated for each of the 47 categories of census tracts included in the report. These data include base housing counts obtained from the 1970 census, and the actual loan counts and dollar volume from the HMDA statements for 1-4 and multi-family housing.

1. Number of Housing Units

Two counts of housing units were derived from the 1970 census for all tracts in each category; multi-family and 1-4 family units. Note that these counts include both rental and owner occupied and vacant housing units (not structures).

2. Multi-Family Property

   Includes the number and dollar volume of loans for multi-family properties made by the institutions and reported for the census tracts included in each category.

3. 1-4 Family/Owner-Occupied

   Includes the number and dollar volume of loans for one to four unit structures ~~and~~ reported by institutions for the census tracts included in each category.

6-31-79

III. INTERPRETATION OF THE REPORT

This section includes information and background data pertinent to the use and evaluation of the Senate Banking Committee Report. It is organized in three sections; General Comments on Interpretation, Levels of Institution Participation in the Study, and Possible Sources of Error.

A. General Comments on Interpretation

The following comments are made to assist in interpreting the data presented in the Senate Banking Committee Report. No attempt has been made to justify most of the comments in depth since several other Home Mortgage Disclosure Act Study Reports present the pertinent details.

1. State Reporting Regulations and HMDA Data

The Home Mortgage Disclosure Act and Regulation C allow financial institutions located in states which have enacted State Disclosure Laws to furnish the State Disclosure Statements in lieu of the Regulation C specified statement. This may be done only if the state institutions concerned have been granted an exemption to HMDA reporting by the Federal Reserve Board. All three states involved in the 1977 study have been granted such an exemption, covering part of the institutions and data included in the Senate Banking Committee reports. Other than the need to convert the California State S&L computer tape data to be compatible with the HMDA Computer System, little problem was noted in processing state reports from either California or New York institutions.

Although the Illinois State Disclosure Act was invalidated during the study, the HMDA Study used the available State Disclosure Reports supplied by the State of Illinois. The Illinois State reports provided a substantial amount of questionable data, due in large part to vague reporting instructions and lack of clear labeling of reports. Illinois required reporting of loan applications, disbursements, and total loan portfolio. The persons processing these reports suspect that, in a large percentage of such cases, the institutions were not sure what data were in fact represented by the unclear reports. Errors in the Senate Banking Committee Report caused by questionable data obtained from Illinois State reports can be best estimated by referring to the accuracy and completeness studies performed during the HMDA

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TABLE OF CONTENTS

FOREWORD

I. MANAGEMENT SUMMARY 1

II. DESCRIPTION OF THE REPORT 2

  A. General Description 2

  B. Categories of Data 2

  C. Data Tabulated 6

III. INTERPRETATION OF THE REPORT 8

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5-31-79

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PREPARED 02/05/79 10.39 HMDA REPORTING SYSTEM 1977 REPORT HMD90J PAGE 1

NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320 SAN DIEGO, CA PROGRAM HMD090

LOCATION OF PROPERTY SECURED BY MORTGAGE LOAN			NO. OF HOUSING UNITS MULTI-FAMILY	NO. OF HOUSING UNITS 1-4 FAMILY	MULTI-FAMILY PROPERTY NO. LOANS	MULTI-FAMILY PROPERTY AMT($000)	1-4 FAMILY/OWNER OCC. NO. LOANS	1-4 FAMILY/OWNER OCC. AMT($000)
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PREPARED 02/05/79  10.39                  HMDA REPORTING SYSTEM 1977                          REPORT  HMD90J      PAGE 2
                                  NEIGHBORHOOD CATEGORY REPORT FOR SMSA 7320  SAN DIEGO, CA   PROGRAM HMD090

    LOCATION OF PROPERTY              NO. OF HOUSING UNITS       MULTI-FAMILY PROPERTY      1-4 FAMILY/OWNER OCC.
  SECURED BY MORTGAGE LOAN          MULTI-FAMILY  1-4 FAMILY     NO. LOANS  AMT($000)       NO. LOANS  AMT($000)
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BALANCE OF URBAN AREA - NEWER:
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                    MIXED                    138       1,127            10       1,412            73       3,051
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* TOTAL - BAL URBAN AREA - NEWER:         18,999      91,843           495     142,431         8,709     431,203

** TOTAL - BALANCE OF URBAN AREA:         21,940     103,667           556     156,398         9,353     464,520

BALANCE OF THE SMSA:
    LOWER INCOME:   MINORITY                   0           0             0           0             0           0
                    MIXED                     19         143             0           0             2          81
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    MIDDLE INCOME:  MINORITY                   0           0             0           0             0           0
                    MIXED                      5       1,195             2       4,991           330      11,205
                    NON-MINORITY             681      10,733            13       6,628         2,098     102,488
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*** G R A N D   T O T A L S ***           30,735     346,787         4,343     667,680        57,520   3,058,586
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After census tracts have been assigned to one of the first three location groups, each tract is further subdivided based on the median age of its housing stock as obtained from 1970 census data. The following categories are used:

- Older--A census tract where the median construction date of the housing stock is 1949 or before (i.e., the median age of the housing stock is 28 years or older, in 1977).

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3. Income of Residents

Each of the six subdivisions of the SMSA's census tracts made using location and age of housing stock is again subdivided using the income of the residents of each tract. The median income for families and unrelated individuals was computed for each tract using 1970 census data. The median income for each tract was then compared to that of the SMSA and the tracts were classified as follows:

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- Middle Income--tracts where the median income is 80% to 120% of the SMSA median income.

- Upper Income--tracts whose median income exceeds 120% of the SMSA median income.

4. Minority Composition of Census Tracts

The final subdivision of census tracts used in producing the report categories is Resident Minority Status. This status is based on the Race of Head of Household as reported in the 1970 census, and includes Black and Spanish American (only) as minorities. The tract was classified by computing the percent of minority heads of household of all heads of households, then assigning categories as follows:

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5. Outside of SMSA

The HMDA statement format suggested in Federal Reserve Board Regulation C provides a space for the total mortgages made outside the relevant SMSA. The Senate Banking Committee Report format includes these data where available as "Total - Outside of SMSA".

C. Data Tabulated

Six data items are tabulated for each of the 47 categories of census tracts included in the report. These data include base housing counts obtained from the 1970 census, and the actual loan counts and dollar volume from the HMDA statements for 1-4 and multi-family housing.

1. Number of Housing Units

Two counts of housing units were derived from the 1970 census for all tracts in each category; multi-family and 1-4 family units. Note that these counts include both rental and owner occupied and vacant housing units (not structures).

2. Multi-Family Property

Includes the number and dollar volume of loans for multi-family properties made by the institutions and reported for the census tracts included in each category.

3. 1-4 Family/Owner-Occupied

Includes the number and dollar volume of loans for one to four unit structures ~~and~~ as reported by institutions for the census tracts included in each category.

III. INTERPRETATION OF THE REPORT

This section includes information and background data pertinent to the use and evaluation of the Senate Banking Committee Report. It is organized in three sections; General Comments on Interpretation, Levels of Institution Participation in the Study, and Possible Sources of Error.

A. General Comments on Interpretation

The following comments are made to assist in interpreting the data presented in the Senate Banking Committee Report. No attempt has been made to justify most of the comments in depth since several other Home Mortgage Disclosure Act Study Reports present the pertinent details.

1. State Reporting Regulations and HMDA Data

The Home Mortgage Disclosure Act and Regulation C allow financial institutions located in states which have enacted State Disclosure Laws to furnish the State Disclosure Statements in lieu of the Regulation C specified statement. This may be done only if the state institutions concerned have been granted an exemption to HMDA reporting by the Federal Reserve Board. All three states involved in the 1977 study have been granted such an exemption covering part of the institutions and data included in the Senate Banking Committee reports. Other than the need to convert the California State S&L computer tape data to be compatible with the HMDA Computer System, little problem was noted in processing state reports from either California or New York institutions.

Although the Illinois State Disclosure Act was invalidated during the study, the HMDA Study used the available State Disclosure Reports supplied by the State of Illinois. The Illinois State reports provided a substantial amount of questionable data, due in large part to vague reporting instructions and lack of clear labeling of reports. Illinois required reporting of loan applications, disbursements, and total loan portfolio. The persons processing these reports suspect that, in a large percentage of such cases, the institutions were not sure what data were in fact represented by the unclear reports. Errors in the Senate Banking Committee Report caused by questionable data obtained from Illinois State reports can be best estimated by referring to the accuracy and completeness studies performed during the HMDA

Study Project.

2. Dwelling Units and Loans

Mortgage lending concerns property, not necessarily living or dwelling units. Thus one loan on an apartment house might cover 50 dwelling units, while a single family loan applies to one dwelling unit. The Senate Banking Committee Report tabulates loans, not dwelling units. Therefore, the validity of comparing the number of loans made to the number of housing units available is questionable.

3. Senate Banking Committee Report Data Categories

The report, as shown on Pages 3 and 4 of this report, presents loan data in 47 categories. These categories have been developed to allow examination of loan data at a level finer than the SMSA total. In many cases, a small change in the criteria for developing the categories could have a marked effect on the data distribution presented. For this reason, it is strongly suggested that the data for specific categories be viewed only as indicators of loan activity rather than absolute statistical evidence of any specific lending conditions within the SMSA.

4. Data Errors

Several possible errors could cause distortion of individual data within the reports. The analyst is referred to a following part of this report as well as other HMDA study reports for more details regarding errors in the data.

5. Completeness of Mortgage Data

The HUD Gross Flow Survey indicates that between 20 and 30 percent of the dollar value of residential mortgage lending originates outside of the financial institutions whose data the Senate Banking Committee Report presents. The absence of these data could cause a highly distorted view of the availability of mortgage financing in many of the reporting categories. The effect of these mortgage lending data at the SMSA level are addressed as part of the completeness portion of the HMDA Study Project.

B. Levels of Institutional Participation in The Study

Participation by institutions in the HMDA Study was voluntary. Follow-up contact was made by the FHLBB and FDIC to invite participation by institutions.

In spite of the concerted effort to obtain HMDA data from all institutions in each Study SMSA, a substantial number of institutions failed to furnish the requested reports. Figure III-1 shows the response of institutions in each SMSA.

	BUFFALO	CHICAGO	SAN DIEGO
# HMDA Institutions	25	589	57
# Institutions Reporting	18	511	49
# Institutions Processable	14	449	47
% Institutions Reporting	72	87	86
% Institutions Processed	56	76	82

Figure III-1
Summary of Institution Compliance

C. Possible Sources of Errors

Several possible error sources could have a major effect on the data presented in the Senate Banking Committee Report. Since many of these errors cannot be predicted or even identified, their effect upon the data presented cannot be ascertained with any reasonable degree of accuracy. The following list is provided to aid in describing the nature, not the degree of the problem. Error sources include the following:

1. Misclassification of loans by reporting institution
2. Errors in assigning census tract codes to loans
3. Errors in tabulating loans (institutions)
4. Data interpretation and transcription errors during processing of an institution's reports
5. Completeness of HMDA data; to what extent do they represent actual lending or credit available in any census tract or SMSA

[illegible]

[illegible]

TRACT LINES	BUFFALO	CHICAGO	SAN DIEGO
. TOTAL PROCESSED	2,242	43,446	6,907
. TOTAL WITHOUT EDIT WARNING OR REJECTION	1,908	33,159	5,880
. PERCENT WITHOUT ERROR OR WARNING	85	76	85
. WITH GEOGRAPHIC ERROR *	70	1,605	336
. WITH LOAN DATA ERROR *	27	2,203	193
LOAN DATA			
. NUMBER OF LOANS			
-TOTAL REPORTED	35,009	145,183	43,160
-INCLUDED IN TABULATIONS	34,738	128,111	42,471
-PERCENT IN TABULATIONS	99	88	98
. DOLLAR VALUE OF LOANS ($ X 1,000)			
-TOTAL REPORTED	530,284	5,394,721	2,590,183
-INCLUDED IN TABULATIONS	521,956	4,997,568	2,547,357
-PERCENT IN TABULATIONS	98	93	98

*LOANS IN THESE ERROR CLASSES ARE REJECTED BY THE SYSTEM AND ARE NOT INCLUDED IN TABULATIONS. ONE TRACT LINE MAY INCLUDE BOTH GEOGRAPHIC AND LOAN DATA ERRORS; SUCH LINES ARE REPORTED IN EACH ERROR CLASS

FIGURE III-2

120

RECOMMENDATIONS FOR CHANGES TO HMDA REPORTING REGULATIONS

Prepared For

Federal Home Loan Bank Board
Federal Deposit Insurance Corporation

In Partial Fulfillment of the Requirements
of the FHLBB Contract #677043

June 1979

RESOURCE CONSULTANTS, INC.
730 E. Highland Avenue
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9
REPORTING REGULATIONS 10
10
10
11
13
esponse 15
ations 16

FOREWORD

This report was written by Resource Consultants, Inc., Phoenix, Arizona, for the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation in partial fulfillment of FHLBB Contract [illegible].

The purpose of this project was to collect and evaluate Home Mortgage Disclosure statements prepared by financial institutions in three standard metropolitan statistical areas (SMSAs); Buffalo, NY; Chicago, IL; and San Diego, CA. The evaluation portion of the project included an analysis of the Home Mortgage Disclosure Act and Regulation C, the processes used to compile the statements required by the Act, and the usefulness of the statements. Project work started on September 30, 1977, and was completed in early 1979. The work included four phases and was performed by two contractors.

Resource Consultants, Inc., was responsible for Phase 1: Developing the Home Mortgage Disclosure Reporting System, collecting and processing disclosure statements from the three SMSAs, and writing four projects reports:

.Recommendations for Changes to HMDA Reporting Regulations

.Costs of Processing HMDA Statements on a Periodic Basis

.Description of the Senate Banking Committee Report

.Project Summary Report

JRB Associates, Inc., McLean, Virginia, is responsible for Phase 2 (Accuracy), Phase 3 (Completeness), and Phase 4 (Management Reports).

Since this report deals with HMDA statements prepared to conform with the requirements of the Home Mortgage Disclosure Act, it is suggested that the reader study the Act and Regulation C, giving special attention to the definitions of terms provided in both documents.

All statistics used in the preparation of this report were developed as a by-product of the Home Mortgage Disclosure Reporting System.

TABLE OF CONTENTS

FOREWORD

I. MANAGEMENT SUMMARY 1

A. Major Recommendations for Changes to Regulation C 1

B. Recommendations Which Involve Regulatory Procedures 1

II. DEVELOPMENT OF ANALYSIS AND RECOMMENDATIONS 3

A. HMDA Processing Objectives and Policies 3

B. Scope of Collection and Processing Effort 3

C. Developing Recommendations 4

III. RESULTS OF HMDA PROCESSING 5

A. Report Format 5

B. Report Header Data 6

C. Loan and Dollar Totals 7

D. Non-Occupant Loan Data 9

E. Census Tract Format 9

F. Census Tract Value 9

IV. RECOMMENDATIONS FOR CHANGES TO HMDA REPORTING REGULATIONS 10

A. Purpose of Recommendations 10

B. HMDA Statement Format 10

C. HMDA Statement Content 11

D. Geographic Coding 13

E. Financial Institution Response 15

F. State Reporting Regulations 16

6-31-79

I. MANAGEMENT SUMMARY

A major portion of the HMDA Study Project was the collection and processing of HMDA statements from 571 financial institutions in the three Study SMSAs. During this processing, statistics were compiled for the purpose of reviewing the HMDA reporting regulations and recommending changes in the regulations.

The analysis of data from the collection effort only considered factors which could be observed directly from the HMDA statements themselves. Care was taken to avoid making recommendations based on opinion or suspected conditions not supported by the data obtained during processing. Thus, findings could be presented regarding the use of non-existant census tract codes, but no comment could be made regarding the proper assignment of existing tract codes to specific loans.

A. The major recommendations for changes to Regulation C are:

1. A standard HMDA statement format should be required. The standard should specify the physical size and arrangement of the statement.

2. The exact content of the HMDA statement should be specified, not left optional. Content includes the manner in which data are reported, for example dollar amounts should be reported in rounded thousands.

3. Clearer instructions regarding the treatment of non-occupant owner loans should be provided.

4. Census tract scheme base year should be specified for each SMSA and should be consistant with the scheme used in the latest Decennial U.S. Census of Population and Housing.

5. If SMSA wide HMDA statistics are to be collected on a regular basis, the regulations should require timely submission of statements to the regulatory agencies.

B. Two recommendations are made which involve regulatory procedures rather than changes to Regulation C.

1. Exemptions based on state law should be examined to insure that the state regulation and instructions are clear and un-ambiguous, and will result in data clearly compatible with HMDA data in both content and format.

6-31-79

2. An extensive effort should be made to educate financial institutions about census tracts and census tract coding.

6-31-79

II. DEVELOPMENT OF ANALYSIS AND RECOMMENDATIONS

The purpose of this report is to analyze the experience gained in processing HMDA and related state disclosure statements, and the statistics obtained from the processing, and to make recommendations for changes in the HMDA regulations.

A. HMDA PROCESSING OBJECTIVES AND POLICIES

1. PROCESSING OBJECTIVES
The following objectives were established for processing HMDA statements during the study project:

.to assess the effects of format variations on the processing of HMDA data,

.to evaluate the costs of processing HMDA data,

.to produce the summary reports required by other parts of the study effort, and

.where possible, to identify and record format variations and data errors.

2. PROCESSING POLICIES
Two policies were followed during the processing of HMDA data:

.to use a reasonable level of effort to enter non-standard HMDA statement data into the processing system but no attempt to reconstruct unprocessable statements, and

.to use production, clerical and processing techniques similar to those which would be necessary if large numbers of statements were being processed on a continuing basis.

These policies were dictated in part by cost constraints, and in part by the need to obtain data on production techniques and costs.

B. SCOPE OF COLLECTION AND PROCESSING EFFORT

The collection effort included 671 institutions in three SMSAs which contain 1,986 1970 Census tracts.

578 institution's reports were received for processing, with usable data obtained from 510 institutions. The 510 processable institutions gave rise to 52,595 census tract lines of data, of which 48,161 were valid for use in the final reports.

Since furnishing reports was voluntary on the part of the financial institutions a substantial amount of time was required to obtain and, in some cases clarify HMDA data. The original 3 month processing schedule had to be extended to over 6 months, due primarily to difficulty in obtaining the HMDA Statements.

C. DEVELOPING RECOMMENDATIONS

Prior to the initiation of HMDA processing, several questions were identified for evaluation during the processing effort. These questions included:

1. What is the effect of state regulations on HMDA processing?
2. How well are institutions following the Regulation C requirements and suggestions?
3. Are institutions handling census tract numbers consistently?
4. Can clerical personnel dependably handle the various statement formats?
5. What level of knowledge and training is required to handle statement processing?

Many of the statistics recorded by the HMDA Reporting System furnished a direct answer to these questions. Other, more subjective questions were answered only by discussion with the personnel involved directly in the actual processing of statements.

A review of the original questions, the statistical results of processing and the observations of the processing staff produced the recommendations made in Part IV of this report.

III. RESULTS OF HMDA PROCESSING

As HMDA statements were received and processed the HMDA Reporting System recorded many of the attributes of the statements and their contents. This section of the report presents a summary of the statistics accumulated as well as pertinent comments.

A. REPORT FORMAT

Three possible "standard" formats were identified prior to processing. These were HMDA (Parts A & B), Illinois State format (combined Parts A & B), and New York State format (combined Parts A & B reported on same form). During processing several other non-standard formats were encountered and were processed under the general category "Other".

	PERCENT OF DOCUMENTS		
FORMAT	BUFFALO	CHICAGO	SAN DIEGO
HMDA Part A	44	17	42
HMDA Part B	-	4	19
Total HMDA	44	21	61
Illinois State	-	63	-
New York State	13	-	-
Other	44	16	39*

*California computer tape reports included in "other".

TABLE III-1
Report Format Distribution

The identification of report format is one of the major time-consuming tasks associated with HMDA processing. Standardization of format would have a substantial probabilty of lowering HMDA processing costs and increasing the reliablility of the statistical data obtained from the statements.

6-31-79

B. REPORT HEADER DATA
Several items were included in this classification of data.

1. Reporting Period:
The following table illustrates that most study institutions reported, or could have easily reported on a 12 month calendar year basis. The Illinois State Disclosure Act required a 6 month reporting, explaining the high percentage of such documents from Illinois.

	PERCENT OF DOCUMENTS		
REPORTING PERIOD	BUFFALO	CHICAGO	SAN DIEGO
CALENDAR FISCAL	100	85	100
12 MONTH REPORT	100	24	100
6 MONTH REPORT	-	76	-

TABLE III-2
Statement Reporting Period

2. Enforcement Agency:
Regulation C requires that the appropriate enforcement Agency name and address be included on each HMDA statement. 79% of Buffalo, 97% of Chicago, and 90% of San Diego institutions complied with this requirement.

3. Statement SMSA
Most institutions included the appropriate SMSA name on their disclosure statement. With the exception of Chicago, all institutions who did not include the SMSA name did include the correct SMSA code designation. It is suspected that incomplete Illinois State regulations and instructions were the reason that 15 Illinois documents included an incorrect SMSA code or no identification of SMSA.

	PERCENT OF DOCUMENTS		
SMSA IDENTIFICATION	BUFFALO	CHICAGO	SAN DIEGO
NAME	87	93	100
CODE ONLY	13	5	-

TABLE III-3
SMSA Identification

Public use of HMDA statements would be made far easier if the full name of the SMSA was included on the report.

4. Method of Preparation
The method used to prepare each document was judged during the statement screening operation. Since statements could have been extracted from a computer report then typed, the observed method of preparation provides only an approximation of the use of computers in statement preparation. Many computer generated statements proved difficult to work with due to the inclusion of zeros in fields where no data were present and the large physical size of some documents.

	PERCENT OF DOCUMENTS		
HOW PREPARED	BUFFALO	CHICAGO	SAN DIEGO
TYPED	56	85	29
COMPUTER PRINTED	44	8	71
HANDWRITTEN	-	7	-

TABLE III-4
Method of Preparation

5. Dollar Amount Representation
Consistancy in dollar amount representation would materially assist anyone attempting to work with statements from several institutions. The thousands of dollars format, rounding to the nearest 1000 dollars and omitting the last three zeros, proved by far the easiest representation to work with.

	PERCENT OF DOCUMENTS		
DOLLARS AS	BUFFALO	CHICAGO	SAN DIEGO
DOLLARS & CENTS	-	1	-
WHOLE DOLLARS	69	21	90
THOUSANDS	31	78	10

TABLE III-5
Dollar Representation

C. LOAN AND DOLLAR TOTALS

Regulation C requires the loan data to be totalled for the SMSA (Section I) and for loans made outside the SMSA (Section II). The regulation does not clearly specify what to include in Section II for institutions who report for more than one SMSA. In general, both Section I and Section II totals were not included in the majority of disclosure statements. Checking of data for errors in addition was not possible in a substantial number of statements due to the absence of Section I totals.

	PERCENT OF DOCUMENTS		
CONDITION OF TOTALS	BUFFALO	CHICAGO	SAN DIEGO
SECTION I			
INCLUDED	50	35	45
MISSING	50	65	55
SECTION II			
MISSING	63	91	83
COLUMN TOTALS DO NOT MATCH SUM OF DATA	50	32	53

TABLE III-6
Column Total Condition

D. NON-OCCUPANT LOAN DATA
Non-occupant loan data have apparently been the subject of widespread misunderstanding on the part of reporting institutions. These data should be included in the four 1-4 residence columns of the statement. That is, a first lien or home improvement loan on a non-occupant owner 1-4 family property should be reported twice: once in its primary loan classification, and again in the non-owner occupied classification. Only in a small number of statements could the treatment of this item be clearly discerned. Note that the Illinois State reports did not include this classification in the report format. This subject is analyzed in detail in a project report by JRB Associates, Inc.

NON-OCCUPANT LOAN TREATMENT	PERCENT OF DOCUMENTS BUFFALO	CHICAGO	SAN DIEGO
NONE REPORTED	63	84	16
CLEARLY SPREAD OVER OTHER COLUMNS	25	6	14
TREATMENT NOT DISCERNABLE	13	8	70
CLEARLY NOT SPREAD OVER OTHER COLUMNS	-	1	-

TABLE III-7
Non-occupant Loan Treatment

E. CENSUS TRACT FORMAT
Two institutions in Buffalo and one institution in San Diego improperly included zip codes along with census tract numbers. In Chicago 66% of the statements included both census tracts and zip codes, probably the result of confusion with the Illinois State Regulation which required reporting of loans by both tract and zip.

F. CENSUS TRACT VALUE
To avoid repetition, statistics and comments regarding clear errors in census tract numbers reported are included in Section IV, Paragraph D1 of this report.

IV. RECOMMENDATIONS FOR CHANGES TO HMDA REPORTING REGULATIONS

A. PURPOSE OF RECOMMENDATIONS

If HMDA reporting is to serve its purposes, as stated in Public Law 94-200, to "provide depositors with information to judge if depository institutions are fulfilling their obligation to serve the housing needs of the communities and neighborhoods where they are located and to aid public officials in the distribution of public investments in a manner that will improve the private investment environment", the HMDA statements must contain data which can be used effectively by the public. As this study project has clearly demonstrated, the current HMDA statements produced in compliance with Regulation C are difficult to interpret and use.

The purpose of the following recommendations for changes in the reporting regulations is to produce HMDA statements that may be identified and interpreted clearly, and can be used in the aggregate to study lending patterns within a community.

B. HMDA STATEMENT FORMAT

In general, the statement format suggested by Regulation C appears to be workable. The major problem encountered is that the format is recommended, not required. Slight variations in format do not create significant problems when analysing one or two institutions' statements. However, when attempting to compile and analyze statements for an entire SMSA, even slight variations in format cause substantial problems in identification and use of the data. These problems in turn inflate the time and cost of collection and analysis by a substantial factor, perhaps as much as two or three times, in addition, the data will generally be less reliable.

If the economical collection and analysis of HMDA statements on a national basis is contemplated, standardized formats are an absolute necessity.

It is recommended that the regulations require the use of a standard HMDA statement format. The standard format should include the following attributes:

1. SIZE
   The statement should be produced on 8-1/2"x11" paper. This allows for copying on standard office equipment for inexpensive distribution to the public. This standard size permits easy handling and filing if several

institutions' statements are being examined or compiled for analysis.

2. STATEMENT LAYOUT
The layout of the statement form should be pre-printed so that all data always appear in the same place. Free form computer layouts should not be permitted. A pre-printed form has been produced and used successfully in both manual and computer (continuous form) statement preparation. A sample page of such a pre-printed form is attached in Appendix A.

A standard, pre-printed layout offers several advantages:

.reporting instructions may be clearly keyed to the form, avoiding confusion for preparers and those interpreting the statement.

.proper alignment of census tract numbers is made less difficult and error prone.

.loan amount representation/standardization becomes less of a problem by identifying and allowing space for thousands of dollars only.

.full report and reporting institution identification on each page is encouraged by providing appropriate spaces on the statement form.

.rapid, accurate data transcription from printed statements is encouraged, leading to more economical analysis of statements for an SMSA or group of SMSAs.

C. HMDA STATEMENT CONTENT

The existing six classifications of loans included on the HMDA Statement are assumed here to be necessary to meet the purposes of HMDA. The regulations do not, however, clearly define what relationships (if any) exist between these six classifications. Further, since no "negative report" is required if an institution did not purchase loans (a report part marked "no data in this category"), the completeness of many statements is questionable. These and other problems encountered with statement content are addressed in the following recommendations:

1. TOTAL RESIDENTIAL LOANS
Approximately 1% of the study institutions did not report either VA-FHA or conventional loans, but did report total residential loans. Since the first two classifications are added to produce the last, no statements regarding the distribution of loans between the VA-FHA and

conventional classes can be made using data collected from these HMDA statements. For this reason, if any entry is made in the total residential classification, equal entry should be made in one of the preceeding two columns. If no VA-FHA loans are included in the report, this might be checked in an appropriate space in the statement heading, allowing one column of numbers to be entered in the total residential classification and avoiding the redundant entry of the conventional classification.

2. ADDENDUM ITEM (NON-OCCUPANT OWNER)
This classification has apparently caused a substantial amount of confusion to the reporting institutions. 78% of the documents processed did not include non-occupant owner loans. After adjusting for Illinois State reports, which did not include this category of data, 74% of remaining documents did not include such loans. Analysis of the HMDA statements shows that in several cases non-occupant loans were tabulated and reported entirely as a separate classification. It is suspected that the same error was made in other statements. Since this classification was not consistantly reported, its value in any aggregate analysis is suspect. The treatment of the classification must be more clearly handled, possibly including examples, in the Regulations.

3. REPORTING PERIOD
85% of the institutions reporting use a calendar fiscal year. Although odd fiscal year reporting periods probably have little effect on the evaluation of one institution's data, such odd periods cause substantial confusion when statements for an entire SMSA are collected. This confusion is compounded by the practice of dating reports with the issue date and not showing the period involved. It is recommended that a one year calendar reporting period be required for all HMDA statements, and that the period year be clearly marked on each page of the statement. Since HMDA reporting does not (or need not) depend on the institution's fiscal year, this requirement should not pose a problem to the reporting institutions.

4. REPORT TOTALS
Loan columns were not totalled on 64% of the statements processed. This omission makes it difficult for the public to easily evaluate the total lending of an institution within an SMSA. Further, a valuable cross check for statement accuracy is lost. Such report (not page) totals should be required.

5. LOANS OUTSIDE THE RELEVANT SMSA
   The regulation's intent in including this aggregate total seems reasonable, since it appears to allow reporting of volume of loans outside the SMSA. However, in branching states where an institution is operating in multiple SMSAs, the figures to be reported are not clear. One solution is to summarize the totals for each SMSA, then report the total aggregate lending outside of all SMSAs.

6. DOLLAR REPRESENTATION
   All dollar amounts should be shown consistantly, preferably in even thousands, omitting zeros. Hundreds of dollars have little meaning given the relatively large values of the reported lending. Further, substantial space is saved on the report form, the report becomes visually less confusing, and consistant treatment of amount speeds comparative analysis.

D. GEOGRAPHIC CODING

The following recommendations regarding geographic codes are limited only to those aspects observed directly in the processing of HMDA statements during this phase of the HMDA study.

Two geographic code related subjects are covered here- census tract validity and tract scheme base year.

1. CENSUS TRACT VALIDITY
   During computer processing of the HMDA Statement data, each census tract number was compared with a list of all valid 1970 census tracts for the appropriate SMSA. If a valid tract code could not be identified, the loan data associated with the failing tract number was rejected. The following table summarizes the results of the tract validity tests.

	BUFFALO	CHICAGO	SAN DIEGO
Report Lines Rejected	70	1,605	336
% All Lines	3	4	5
Loans Rejected	271	17,072	689
% Mortgages Loans	1	12	2
$ Value Rejected*	8,328	397,153	42,826
% Total Value	2	7	2

*Thousands of dollars

TABLE IV-1

Tract Validity Test Results

HMDA DATA LOST DUE TO REJECTED CENSUS TRACT CODES

An examination of the census tract related rejections suggests that face value tract number errors do not constitute a serious problem in either Buffalo or San Diego. The Chicago error rate must, however, be regarded as very serious in comparison to the two other SMSAs.

Further investigation of the Chicago data shows that 9% of the loans representing 5% of the value failed because the census tract number was not even within the proper range of numbers. An additional 1% of loans and value failed because ZIP codes, not census tracts were reported. The balance of errors was primarily caused by tract numbers in the proper range, but not valid tracts.

Visual examination of the rejected tract numbers leads to the suspicion that many of the tract number failures are the result of poor formatting of the tract numbers and the inclusion of data from other SMSAs in Illinois. Examination of the Illinois reports does not provide sufficient information to identify the precise cause of these errors. It is anticipated that field work performed as part of the HMDA study will provide factual explanation of the sources of these errors.

The Chicago results are probably most heavily influenced by the nearly total absence of clear reporting regulations or instructions for the Illinois State Act, since nearly all of the failures originate in Illinois State reports, not those submitted under HMDA regulations.

The Chicago tract edit failures, and to a much smaller degree, those in Buffalo and San Diego, demonstrate a general lack of knowledge of census tracts and SMSAs on the part of financial institution employees. Before accurate data reporting by census tract is realized, more education and experience on the part of those coding and preparing reports must be gained. This education extends even to the proper way of writing tract numbers.

2. TRACT SCHEME BASE YEAR

One of the major values of using census tracts as the geographic unit for HMDA data aggregation is the nationwide availability of baseline demographic or housing data. Such data permit the evaluation of lending with reference to many of the characteristics of the population of each census tract.

Census tract numbers and boundaries are not permanent. Although tract changes seldom occur more frequently than every five years, it is probable that some changes will occur in all SMSAs in conjunction with each decennial census. Nearly all changes in census tracts are limited to subdivision of existing tracts. Thus, data for new tracts may usually be "collapsed" back to the original tract. An examination of erroneous census tract numbers from the HMDA statements indicates the presence of post 1970 tract numbering schemes. As more changes to 1970 tracting schemes are approved in preparation for the 1980 decennial census, more such occurances must be expected, making HMDA statements more difficult and costly to use.

Census tract splits occuring between each decennial census will usually not effect the areas of interest to an anlysis of lending patterns, since such split tracts are usually located in high growth suburban areas.

It is recommended that HMDA reporting be based on the tracting scheme used in the latest decennial census or that the scheme to be used be collapsable to that scheme.

E. FINANCIAL INSTITUTION RESPONSE

Participation of financial institutions in the HMDA study project was voluntary. The Home Mortgage Disclosure Act only requires that HMDA statements be made available for public examination. It does not require or suggest that statements be filed with or furnished to the regulatory agencies. Most institutions responded to the request from the FHLBB and FDIC for their statements. The following table displays the participation by HMDA institutions within the study SMSAs.

	BUFFALO	CHICAGO	SAN DIEGO
# HMDA Institutions	25	589	57
# Institutions Reporting	18	511	49
# Institutions Processable	14	449	47
% Institutions Reporting	72	87	86
% Institutions Processed	56	76	82

TABLE IV-2
Financial Institution Response

Although treated elsewhere in the HMDA study, the net loss of data and resultant incompleteness of SMSA tabulations due to non-response cannot be estimated or evaluated in this report. However, if regular collection and SMSA wide processing of HMDA statements is anticipated, the regulations must be changed to require reporting and establish penalties for non-compliance. To do otherwise would produce incomplete and therefore unreliable data.

F. STATE REPORTING REGULATIONS

One of the objectives of the HMDA study was to use supplemental data available in the study SMSAs as a result of state disclosure laws.

The Home Mortgage Disclosure Act provided that exemptions could be granted to institutions reporting under state law where reporting under such laws was found to substantially meet the requirements of HMDA. Disclosure statements from state chartered institutions in each of the three study SMSAs were processed during the study.

Examination of state disclosure statement data and the state disclosure regulations lead to the conclusion that:

. The New York Regulations resulted in statements that meet the HMDA requirements in form and content

. The California S&L Regulations meet the HMDA requirement insofar as the data collected (the California Regulation does not apparently require a HMDA statement, however, the State Department of Savings and Loan is producing statements in HMDA format from data supplied to it by the state chartered S&Ls), and

. The Illinois Regulations were extremely vague and resulted in confusion in report content and geographic definition. (These regulations were ruled invalid by the Illinois Supreme Court during the study.)

It is recommended that exemptions to HMDA be granted only after a careful review of state acts and the implementing regulations or instructions to insure that the statements produced will be comparable in form, content and data quality with HMDA statements.

Mortgage Loan Disclosure Statement

Reporting Institution: **Date:**

Address: **Page** **of**

City: **State:** **Zip:** **Reporting Period:** **to**

Relevant SMSA: **SMSA Number:**

Federal enforcement Agency for this Institution:

Name: **Address:**

Mortgage loan data relating to residential real property located within the relevant SMSA

	Loans to both occupants and non-occupants of the property											
	☐ ORIGINATED ☐ PURCHASED (Thousands of Dollars)											
ENSUS RACT ☐	FHA, FmHA OR VA LOANS (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS ("Conventional") (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTGAGE LOANS (except on multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)	
ZIP CODE ☐	No.	$ Amount	No.	$ Amount	No.	$ Amount	No.	$ Amount	No.	$ Amount	No.	$ Amount
Column Totals												
Mortgage loan data relating to residential real property located outside the relevant SMSA (or SMSAs)												
▨											▨	

APPENDIX A

resource consultants, inc. -Form 94200

COSTS OF PROCESSING HMDA STATEMENTS
ON A PERIODIC BASIS

Including a Description of Processing Components

Prepared For

Federal Home Loan Bank Board and
Federal Deposit Insurance Corporation

In Partial Fulfillment of the Requirements
Of FHLBB Contract #677043

June 1979

RESOURCE CONSULTANTS, INC.
730 E. Highland Avenue
Phoenix, AZ 85014

FOREWORD

This report was written by Resource Consultants, Inc., Phoenix, Arizona, for the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation in partial fulfillment of FHLBB Contract 677043.

The purpose of this project was to collect and evaluate Home Mortgage Disclosure statements prepared by financial institutions in three standard metropolitan statistical areas (SMSAs); Buffalo, NY; Chicago, IL; and San Diego, CA. The evaluation portion of the project included an analysis of the Home Mortgage Disclosure Act and Regulation C, the processes used to compile the statements required by the Act, and the usefulness of the statements. Project work started on September 30, 1977, and was completed in early 1979. The work included four phases and was performed by two contractors.

Resource Consultants, Inc., was responsible for Phase 1: Developing the Home Mortgage Disclosure Reporting System, collecting and processing disclosure statements from the three SMSAs, and writing four projects reports:

.Recommendations for Changes to HMDA Reporting Regulations

.Costs of Processing HMDA Statements on a Periodic Basis

.Description of the Senate Banking Committee Report

.Project Summary Report

JRB Associates, Inc., McLean, Virginia, is responsible for Phase 2 (Accuracy), Phase 3 (Completeness), and Phase 4 (Management Reports).

Since this report deals with HMDA statements prepared to conform with the requirements of the Home Mortgage Disclosure Act, it is suggested that the reader study the Act and Regulation C, giving special attention to the definitions of terms provided in both documents.

All statistics used in the preparation of this report were developed as a by-product of the Home Mortgage Disclosure Reporting System.

6-31-79

TABLE OF CONTENTS

FOREWORD

I MANAGEMENT SUMMARY 1

II HMDA PROCESSING REQUIREMENTS AND COSTS 2

- A. Introduction 2
- B. Processing Steps 2
- C. Assumptions 5
- D. Cost of Processing HMDA Statements 6
- E. Estimating HMDA Processing Costs 11
- F. Cost of National HMDA Processing 19

6-31-79

I. MANAGEMENT SUMMARY

This report presents an analysis of the costs of processing Home Mortgage Disclosure statements using the HMDA Reporting System.

The processing procedures used during the HMDA Project in 1978 are described and basic cost assumptions are stated.

Processing costs are presented in unit work form and may be applied to any SMSA using readily available SMSA related data. Final estimates may then be derived using labor rates developed to include direct and indirect overhead costs.

The estimator is cautioned that the continuity of work will have an extraordinary effect upon the cost of HMDA processing.

6-31-79

I. HMDA PROCESSING REQUIREMENTS & COSTS

A. Introduction

The purpose of this report is to evaluate the cost of processing Home Mortgage Disclosure Act statements on a periodic basis using the HMDA Reporting System. The report is based on an analysis of RCI's experience in processing the HMDA statements for the fiscal year 1977 from the three project SMSAs: Buffalo, New York; Chicago, Illinois; and San Diego, California.

The statements required by the Home Mortgage Disclosure Act of 1975 were requested from the financial institutions in each project SMSA. The statements were received by the FHLBB and FDIC and forwarded in batches to RCI for processing. The processing was done on the computer reporting system developed by RCI as part of the project. Operating on the FHLBB's DEC-10 computer, this system was used to record, check and summarize approximately 800 HMDA statements; 20 from Buffalo, 729 from Chicago, and 57 from San Diego.

Each HMDA statement was identified, screened, entered into the system, and checked for possible errors by the computer. All statement data from each SMSA was consolidated to produce a series of SMSA-wide statements. Finally, RCI evaluated the results of the computer error checking and production figures. Written reports were produced based upon these evaluations.

B. Processing Steps

The following is a brief summary of the steps involved in processing HMDA statements using the HMDA Reporting System. Detailed step by step operating instructions are contained in the Clerical Procedures Manual and other System documentation.

1. Project Initialization

Prior to actual processing, several tasks must be performed to establish the management basis for the project. These tasks include:

- Determine the identity of the SMSAs to be analyzed.

[illegible] the project manager and [illegible] [illegible] to [illegible] the project and [illegible]

[illegible] the [illegible] [illegible] [illegible] to the [illegible].

[illegible] the budget.

Ensure that the project manager and supervisors completely familiarize themselves with the system [illegible] and processing manuals.

2. **System Preparation**

By knowing the project [illegible] and the processing system, the project manager and supervisor can [illegible] the project planning phase. At this point a working budget is drafted based upon the cost data presented in this report. During the planning and budgeting process, the project manager specifies the necessary equipment, supplies, facilities and personnel to accomplish the processing within the desired time frame. As soon as the levels of equipment, etc. are determined, the supervisor should immediately procure the items. Working space is arranged to provide for both the computer and manual processing steps. Adequate storage is furnished and necessary forms and supplies are procured and stocked.

3. **Defining SMSA Parameters**

After identification of an SMSA for processing, the supervisor establishes the processing requirements. The FHLBB and FDIC provide the supervisor with the SMSA institution listings. From these data, the Institution ID File is constructed.

As soon as the Institution listings are available, a form letter requesting the HMDA Statements is sent to all HMDA institutions in each SMSA. The letter requests the statements chosen for processing. It is imperative this be done as soon as possible and that it requires immediate response by the Institution. To minimize turn-around and idle time, the institutions must comply as quickly as possible.

Using the HMDA system programs, six (6) identification labels are printed for each institution within the SMSA. The clerk then sets up an alphabetic filing system for each SMSA. An ID label is affixed to a folder for each institution within the SMSA. The files are used to retain the remaining labels, all statements, and any other material relating to that specific institution.

Meanwhile, the supervisor obtains the required Census data files. Using this information, the Geo-Validation File is created. This is checked against the Census Bureau PHC-1 and HC-3 maps for each SMSA to verify the accuracy of the tract lists. He also obtains the Senate Banking Committee Demographic and Geographic Data and adds it to the Geo-Validation File. This work must be completed prior to processing HMDA Statements through the computer system.

The supervisor then reviews the screening and keypunch forms and instructions for possible changes due to the nature of reporting in a particular SMSA.

The supervisor must then train the HMDA statement screening clerk and arrange for keypunch services. The supervisor is responsible for reviewing the keypunch procedures with the keypunch supervisor and personnel.

4. Receive & Screen HMDA Statements
The clerk receives the requested HMDA statements from the various institutions and prepares them for processing. The statements are identified, matched with the institution folder, and verified for the prescribed content. Each statement is carefully examined by the clerk to confirm that all information is acceptable to the system. Extraneous documents or irrelevant information i e column subtotals, incorrect categories) are deleted The clerk then completes the Document Transmittal Sheet for each statement.

5. Computer Processing of HMDA Statements
The HMDA statements are now entered into the computer. The statements are alphabetically batched according to SMSA in groups of approximately forty-five (45) documents. Each statement in the batch is then logged into the computer system. Each document is assigned a sequential control number by the system. Brief identification data is registered in the system files under this control number.

After entry in the HMDA system, the keypunch instructions are completed on the Document Transmittal Sheet. The batch is then sent to keypunch for transcription onto magnetic tape and returned to the supervisor.

6. Edit Review and Correction

The final processing step verifies the form and reasonableness of the information entered into the system. The magnetic tape containing the HMDA data is read into the DEC-10 computer files. The supervisor then initiates system programs which edit the HMDA reports. The supervisor reviews the reports from the computer edits. He determines the cause of any errors and decides what corrective action is required. The clerk purges and reprocesses those statements that require change.

A certain number of reports are entered as unprocessable because of incomplete or missing information (these will remain so unless further action is taken). Once all problems are identified and resolved, all institution statements will have been accounted for or entered into the system. At this point, the supervisor runs the consolidated SMSA-level HMDA reports.

C. Assumptions

Our cost analysis is based on the following assumptions.

- The HMDA regulations will remain unchanged.
- The HMDA reporting system will remain unchanged.
- Regardless of SMSA, the institution reporting formats can be processed through the present system.
- The processing will be done from a steady flow of statements.
- All HMDA statements will be received at one location under the direction of the project supervisor.
- A daily record of institutions reporting will not be required. This will allow one-step processing of individual HMDA statements.

- Document Log-in Processing will be done on the FHLBB DEC-10 computer using a 1200 baud printing terminal.
- Key entry will be performed without verification using key to tape equipment.
- Key entry estimates are based upon approxiamtely 800 HMDA statements. All others are based upon 950 statements received (800 were processed, 70 were screened as unprocessable and 80 were identified as not on institution ID file).

D. Cost of Processing HMDA Statements

HMDA processing costs are presented in the order in which they will most probably be encountered. They are based on the assumptions listed above in Section IIC.

Two broad cost categories are recognized: set-up costs and processing costs.

1. Set-up Costs

Set-up costs may be classified into three categories, project related, SMSA related, and institution related.

a. Project related set-up costs

In general, project level costs include those items which are not directly related to the number of SMSAs or the volume of reports being processed, or which may be estimated based on a rough approximation of volume and processing schedule.

Project organization: includes selection of project management, familiarization with the HMDA Reporting System, project planning, and project budgeting. The size and cost of the project management function will depend on the volume of work in process. The minimum size project management function will include half time of a junior level project manager. A nation wide collection effort would require a very senior project manager plus as many as four production managers. The cost of project management can only be determined after the number of supervisors and clerks to be employed has been determined.

6-31-79

The following time should be allowed for project set-up for the manager familiarization and training of personnel:

Project Manager	160 man hours
Production Manager (if used)	120 man hours each
Supervisor	40 man hours each

b. SMSA related set-up costs

This category of set-up costs depends primarily upon the number and size of the SMSAs to be processed.

Data required to establish system files for each SMSA to be processed:

Census data used for establishing the Geo-Validation File must be obtained, usually from a commercial source. A budget figure of $2.00 per census tract will usually cover the raw data cost. Additional costs to extract, process and check the data will include (per SMSA):

Supervisor	8 man hours
Clerical Worker	24 man hours
Computer Time	$ 1.00 per tract
Maps & Materials	$200.00 per SMSA

c. Institution related set-up costs

These costs include obtaining the HMDA statements from each institution and preparing the clerical files to accomodate the statements when they are received.

- File folders must be established using system printed labels for each HMDA institution in each SMSA.

Clerical Labor	.05 man hour per institution
Supplies & Materials	$.40 per institution

- Mailings must be made to each institution to obtain HMDA Statements. Since this work was performed by the FHLBB and FDIC, we have no cost experience resulting from the HMDA Project. Commercial mailing costs for form letters would indicate a minimal cost of $.50 per institution for this task.

2. Processing Related Costs

This category of costs includes project related and volume related charges. Although unit processing costs may be estimated under continuous, regular processing conditions, our experience is that such conditions will probably not prevail.

For example, although the actual processing for the three HMDA Study Project SMSAs might have been accomplished in approximately two months of continuous work, nearly six months were required to process all the statements received The substantial difference was due to several factors, including delay in the receipt of statements and the need for sending requests to institutions for clarification of statements.

The net effect of sporadic processing is a significant increase in processing costs, for although the supervisor and clerks may be provided with non-project related tasks during interim slack times, their efficiency drops substantially.

The estimates presented below include a moderate amount of such delay caused inefficiency.

a. Project management related processing costs

Project management includes scheduling, progress reporting, problem solving, supervision, budget and cost reporting, and other similar tasks. The level of effort will depend on the experience of the project manager, the scope of the project, and the support of senior management within the organization In our experience, HMDA processing requires a fair amount of management effort, possibly due to the level of financial institution cooperation, the number of agencies involved, the non-standard form of HMDA statements, and the political nature of the subject.

A minimum project management effort will require 20 manhours per project week with no production manager. A processsing load requiring five supervisors and clerks is probably the limit of one project manager's ability to control without assistance. One production manager should be added to the staff for each combination of five supervisors and clerks assigned to the project.

The processing related project management costs can only be estimated by first determining the number of supervisory and clerical man days required, then dividing by the number of project days to obtain the number of supervisors and clerks needed.

b. Volume related processing costs

Processing volume is expressed by two factors, the number of HMDA statements processed and the total number of report tract lines processed. A reasonably accurate estimate of these two quantities is necessary if dependable processing cost estimates are to be made.

. Costs per HMDA statement. Depending upon the existence of state level reporting requirements, the number of statements to be processed may be estimated from the number and type of institutions in each SMSA. For HMDA reporting institutions the Part A (Originations) and Part B (Purchases) portions of the HMDA submittal are each counted as one statement since they must be processed separately. If state regulations call for semi-annual reporting, then the institutions subject to such regulations will have two reports to process, not one.

Once the number of statements is estimated, the per statement cost can be estimated using the following factors:

Cost Item	Factor per Statement
Supervisor man hours	.30 Man hours
Clerical man hours	.50 Man hours
Keypunch hours	.44 Hours
Computer connect hours	.30 Connect hours

- Cost per tract line. Estimating the number of tract lines to be processed is difficult. Based on our initial experience, we recommend the following method.

  Note that this method is based on a rather crude relationship that appears to exist between the growth in an SMSA, its form of banking, and its number of owner occupied dwelling units. The method works reasonably well with the three study SMSAs. It is not, however, more that an educated guess at a possible way to estimate the number of tract lines to be processed.

  - Obtain the number of owner occupied housing units for the SMSA from the 1970 Census PHC(1) Reports.
  - Multiply the number of owner occupied units by the appropriate value from the following table to obtain the estimate of tract lines.

FINANCIAL INSTITUTION STRUCTURE IN SMSA		FACTOR, TRACT LINES PER DWELLING UNIT
Statewide Branching	Stable or Declining SMSA	.01
	Growth Area SMSA	.03
Unit Banking	Stable or Declining SMSA	.025
	Growth Area SMSA	.035

Table II-1
Tract Line Factors

Do not neglect to adjust the estimate if semi-annual reporting is anticipated.

Once the number of tract lines has been estimated, the tract line processing cost component may be derived from the following factors:

Cost Item	Man Hours per Tract Line
Supervisor man hours	.104
Clerical man hours	.172
Keypunch hours	.107

In applying the foregoing time estimates, we recommend that the hourly labor rates include costs for normal office space, furnishings, and clerical supplies. The cost of one 300 baud printing terminal should also be factored into clerical time costs.

B. Estimating SMSA Processing Costs

The time and cost factors discussed in Part 3 of this report have been incorporated in a form so that costs may be estimated for collecting and processing HMDA statements from any specified SMSA. The use of this form is illustrated by estimating the processing costs for the three study SMSAs.

1. Assumptions

The following assumptions apply to the example SMSA cost estimates:

- The three SMSAs would be processed simultaneously and managed as one project.

- Direct labor costs include office space and equipment and all overhead charges.

Computer Connect Time	10.00/hr
Project Manager	35.00/hr
Supervisor	20.00/hr
Clerical	15.00/hr
Keypunch	10.00/hr

2. Procedure

The estimator must initially obtain three basic figures:

- The number of HMDA institutions in the SMSA. Source: FHLBB and FDIC records.

- The number of owner occupied dwelling units within the SMSA: Source: U.S. Bureau of the Census; Census of Population and Housing: 1970; Census Tracts; Final Report PHC(1) - (for the subject SMSA).

- The number of census tracts in the SMSA. Source: U.S. Bureau of the Census, Geography Division, Washington, D.C.

Using the forms, the basic quantities obtained above, the factor in Table II-1, and the appropriate labor rates, the estimating form may be completed.

Note that the cost of the project management function depends in large part on the estimator's judgement of how the project will be organized.

SMSA PROCESSING ESTIMATE

SMSA NAME: Chicago, IL

SET-UP COSTS

1. PROJECT MANAGEMENT:

.Project Manager: 160 hrs. @ $ 15.00/hr. rate = $ [illegible]

Production Managers: - number X 120 hrs. = tot. hrs. @ rate = $

.Supervisors: 1 number X 48 hrs. = 48 tot. hrs. @ $ [illegible] rate = $ [illegible]

NOTE: 3 SMSA Project; 1/3 to this SMSA = $2,130 SUB TOTAL $ [illegible]

2. SMSA SET-UP:

.Demographic Data: 1398 # tracts X $3.00 /tract = $ 4,194.

.Maps/Materials: @ $200. per SMSA = $ 200.

.Supervisory: 8 hrs. @ $ 20./hr. = $ 160.

.Clerical: 24 hrs. @ $15./hr. rate = $ 360.

SUB TOTAL $ 4,914.

3. INSTITUTION SET-UP:

Clerical: 589 # institutions X .05 hr/inst. = 30 tot. hrs. @ $ 15 rate = $ 450

.Supplies, Materials, Postage: 589 # institutions X $.90 = $ 530.

SUB TOTAL $ 980.

TOTAL SET-UP COSTS: = $ 8,024

HMDA PROCESSING ESTIMATE

SMSA NAME: Chicago, IL

B. PROCESSING COSTS

1. PROJECT MANAGEMENT: (Project Duration = 3 Months)

.Project Manager:	120 hours	@ $ 35. rate				= $ 4,200.
.Production Manager:	- persons	@ - hrs/person	= - tot.hrs.	@$ - rate		= $ -

SUB TOTAL $ 4,200.

2. VOLUME RELATED COSTS:

a. STATEMENT RELATED: (589 # institutions X 2 = 1178 # statements)

.Supervisor:	1,178 # statements	X .30	= 354 tot. hrs.	@$ 20. rate	= $ 7,080.
.Clerical:	1,178 # statements	X .50	= 589 tot. hrs.	@$ 15. rate	= $ 8,835.
.Keypunch:	1,178 # statements	X .44	= 519 tot. hrs.	@$ 10. rate	= $ 5,190.
.Computer Connect:	1,178 # statments	X .30	= 354 tot. hrs.	@$ 10. rate	= $ 3,540.

SUB TOTAL $ 24,645.

b. TRACT LINE RELATED: (1,155,100 # owner DU's X .035 factor =(40,429. tract lines)

.Supervisor:	40,429 tract lines	X .004	= 162 tot. hrs.	@$ 20. rate	= $ 3,240.
.Clerical:	40,429 tract lines	X .012	= 485 tot. hrs.	@$ 15. rate	= $ 7,275.
.Keypunch:	40,429 tract lines	X .007	= 283 tot. hrs.	@$ 10. rate	= $ 2,830.

SUB TOTAL $ 13,345.

TOTAL PROCESSING COSTS: =$ 42,190.

TOTAL SET-UP AND PROCESSING COSTS: = $ 50,214

SMSA PROCESSING ESTIMATE

SMSA NAME: Buffalo, N.Y.

SET-UP COSTS

1. PROJECT MANAGEMENT:

•Project Manager: 160 hrs. @ 35 rate = $ 5,600.

•Production Managers: - number X 120 hrs. = - tot.hrs. @ - rate = $ -

•Supervisors: 1 number X 40 hrs. = 40 tot.hrs. @ $ 20. rate = $ 800.

SUB TOTAL $ 6,400.

(NOTE: 3 SMSA Project; 1/3 to this SMSA = $2,130.)

2. SMSA SET-UP:

•Demographic Data: 272 # tracts X $3.00 = $ 816.

•Maps/Materials: @ $200. per SMSA = $ 200.

•Supervisory: 8 hrs. @ $ 20. rate = $ 160.

•Clerical: 24 hrs. @ $15. rate = $ 360.

SUB TOTAL $ 1,536.

3. INSTITUTION SET-UP:

•Clerical: 25 # institutions X .05 hr./inst. = 1.25 tot. hrs. @ $15. rate = $ 19.

•Supplies, Materials, Postage: 25 # institutions X $.90 = $ 23.

SUB TOTAL $ 42.

TOTAL SET-UP COSTS: = $ 3,708

HMDA PROCESSING ESTIMATE

SMSA NAME: Buffalo, N.Y.

B. PROCESSING COSTS

1. PROJECT MANAGEMENT: (Project Duration = 3 Months)

.Project Manager:	60 hours	@ $ 35. rate				= $ 2,100.
.Production Manager:	- persons	@ - hrs/person	= - tot.hrs.	@$ - rate		= $ -

SUB TOTAL $ 2,100.

2. VOLUME RELATED COSTS:

a. STATEMENT RELATED: (25 # institutions X 2 = 50 # statements)

.Supervisor:	50 # statements	X .30	= 15 tot. hrs.	@$ 20. rate	= $ 300.
.Clerical:	50 # statements	X .50	= 25 tot. hrs.	@$ 15. rate	= $ 375.
.Keypunch:	50 # statements	X .44	= 22 tot. hrs.	@$ 10. rate	= $ 220.
.Computer Connect:	50 # statments	X .30	= 15 tot. hrs.	@$ 10. rate	= $ 150.

SUB TOTAL $ 1,045.

b. TRACT LINE RELATED: (263,000 # owner DU's X .01 factor =(2630 tract lines)

.Supervisor:	2630 tract lines	X .004	= 11 tot. hrs.	@$ 20. rate	= $ 220.
.Clerical:	2630 tract lines	X .012	= 32 tot. hrs.	@$ 15. rate	= $ 480.
.Keypunch:	2630 tract lines	X .007	= 19 tot. hrs.	@$ 10. rate	= $ 190.

SUB TOTAL $ 890.

TOTAL PROCESSING COSTS:=$ 4,035.

TOTAL SET-UP AND PROCESSING COSTS: = $ 7,743.

HMDA PROCESSING ESTIMATE

SMSA NAME: San Diego, CA

A. SET-UP COSTS

1. PROJECT MANAGEMENT:

•Project Manager: 160 hrs. @ 35 rate = $ 5,60

•Production Managers: - number X 120 hrs. = - tot.hrs. @ - rate = $ -

•Supervisors: 1 number X 40 hrs. = 40 tot.hrs. @ $ 20. rate = $ 80

SUB TOTAL $ 6,40

(NOTE: 3 SMSA Project; 1/3 to this SMSA = $2,130.)

2. SMSA SET-UP:

•Demographic Data: 316 # tracts X $3.00 = $ 94

•Maps/Materials: @ $200. per SMSA = $ 20

•Supervisory: 8 hrs. @ $ 20. rate = $ 16

•Clerical: 24 hrs. @ $ 15. rate = $ 36

SUB TOTAL $ 1,66

3. INSTITUTION SET-UP:

•Clerical: 57 # institutions X .05 hr./inst. = 3 tot.hrs. @ $15. rate = $ 4

•Supplies, Materials, Postage: 57 # institutions X $.90 = $ 5

SUB TOTAL $ 9

TOTAL SET-UP COSTS: = $ 3,89

Page 2 of 2

HMDA PROCESSING ESTIMATE

SMSA NAME: San Diego, CA

B. **PROCESSING COSTS**

1. PROJECT MANAGEMENT: (Project Duration = 3 Months)

.Project Manager: 90 hours @ $ 35. rate = $ 3,150.

.Production Manager: - persons @ - hrs/person = - tot.hrs. @$ - rate = $ -

SUB TOTAL $ 3,150.

2. VOLUME RELATED COSTS:

a. STATEMENT RELATED: (57 # institutions X 2 = 114 # statements)

.Supervisor: 114 # statements X .30 = 35 tot. hrs. @$ 20. rate = $ 700.

.Clerical: 114 # statements X .50 = 57 tot. hrs. @$ 15. rate = $ 855.

.Keypunch: 114 # statements X .44 = 51 tot. hrs. @$ 10. rate = $ 510.

.Computer Connect: 114 # statments X .30 = 35 tot. hrs. @$ 10. rate = $ 350.

SUB TOTAL $ 2,415.

b. TRACT LINE RELATED: (238,900 # owner DU's X .03 factor = (7170 tract lines)

.Supervisor: 7170 tract lines X .004 = 29 tot. hrs. @$ 20. rate = $ 580.

.Clerical: 7170 tract lines X .012 = 86 tot. hrs. @$ 15. rate = $ 1,290.

.Keypunch: 7170 tract lines X .007 = 50 tot. hrs. @$ 10. rate = $ 500.

SUB TOTAL $ 2,370.

TOTAL PROCESSING COSTS: = $ 7,935.

TOTAL SET-UP AND PROCESSING COSTS: = $ 11,830.

F. Cost of National HMDA Processing

At the request of the FHLBB the cost of processing all HMDA statements for all SMSAs was estimated. The estimate is based on the cost figures developed during the HMDA study project. Since the scope and complexity of a nationwide project would be much greater than the study project, and since many of the work quantities are extremely difficult to estimate, it is important to realize that the actual costs could vary substantially from the estimate- as much as - 30% or to + 50%.

1. Assumptions

For purposes of this estimate, the following assumptions were made.

- 283 SMSAs
- 8,138 HMDA reporting institutions
- 31 million owner occupied dwelling units in all SMSAs would result in 520,000 tract line records
- Processing would require one year.
- Hourly rates include benefits and overhead (including office space and equipment):

Project manager	35.00 per hour
Production manager	25.00 per hour
Supervisor	20.00 per hour
Clerk	15.00 per hour

- All costs are based on 1978 dollars.

2. Costs if no changes in reporting regulations:

- Set-up costs

- Project management	$ 38,000
- SMSA set-up	324,000
- Institution set-up	14,000
Total set-up costs	$ 376,000

. Processing costs

- Project management	$ 220,000
- Statement related	341,000
- Tract line related	205,000
Total processing costs	766,000
Total project cost	$ 1,142,000

3. Costs if reporting regulations changed per recommendations contained in Recommendations For Changes in HMDA Reporting Regulations, produced by Resource Consultants, Inc., as part of the HMDA Study Project.

The recommended changes would most probably substantially reduce supervisor and clerical processing time, giving the following revised estimates.

- Project management	$ 32,000
- SMSA set-up	324,000
- Institution set-up	14,000
Total set-up costs	$ 370,000

- Project management	$ 145,000
- Statement related	182,000
- Tract line related	141,000
Total processing costs	468,000
Total project cost	$ 838,000

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

COMPLIANCE ANALYSIS

COMPLIANCE ANALYSIS: Use of Home
Mortgage Disclosure Data to Deter-
mine Compliance with Antidiscrimi-
nation Laws and Regulations

For
Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
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November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

TABLE OF CONTENTS

Page

FOREWORD i

SUMMARY iii

1. INTRODUCTION 1-1

1.1 Purpose 1-1

1.2 Scope 1-1

1.2.1 The Acts and Regulations Considered 1-1
1.2.2 Categories of Users 1-2
1.2.3 Uses of Mortgage Disclosure Data 1-2

1.3 Methodology 1-5

1.4 Contents of This Report 1-6

2. HOME MORTGAGE DISCLOSURE ACT DATA 2-1

2.1 Requirements of the Act and Regulation C 2-1

2.1.1 Institutions Subject to the Act 2-1
2.1.2 Reporting Requirements 2-2
2.1.3 Availability Requirements 2-3

2.2 What Mortgage Disclosure Data Can Show 2-4

2.2.1 Volume of Mortgage Lending 2-4
2.2.2 Types of Mortgage Lending 2-4
2.2.3 Geographical Pattern of Lending by Census Tract 2-4

2.3 What the Data Do Not Show 2-5

2.3.1 Limitations of the Form of the Data 2-5
2.3.2 Completeness 2-9
2.3.3 Accuracy 2-10
2.3.4 Data not Disclosed Under the Act 2-10

3. A SUMMARY OF ANTIDISCRIMINATION ACTS AND REGULATIONS 3-1

3.1 The Regulatory Context 3-1

3.2 The Fair Housing Act (Title VIII) 3-1

3.3 The Equal Credit Opportunity Act (ECOA) 3-3

3.4 Regulations Promulgated Pursuant to Title VIII and ECOA . . . 3-4

3.4.1 *FDIC Regulation Part 338, Fair Housing Regulations* . . 3-4
3.4.2 *FHLBB Regulation Parts 528, 531.8, Non-Discrimination Requirements, Statements of Policy: Guidelines Relating to Non-Discrimination in Lending* 3-6
3.4.3 *Regulation B, Equal Credit Opportunity* 3-7

TABLE OF CONTENTS (Cont'd)

Page

3.5 The Community Reinvestment Act (CRA) 3-18

3.6 Community Reinvestment Act Regulations 3-9

4. USE OF MORTGAGE DISCLOSURE DATA IN COMPLIANCE DETERMINATION . . . 4-1

4.1 The Analysis of Potential Uses 4-2

4.1.1 *The Requirements* 4-2
4.1.2 *The Relationship Among Compliance Requirements, Geographic Lending Patterns, and Demographics* 4-5
4.1.3 *An Alerting Mechanism* 4-9
4.1.4 *Determining Compliance* 4-15

4.2 Current Use of Mortgage Disclosure Data by the Regulatory Agencies 4-19

4.2.1 *Instructions to Examiners* 4-20
4.2.2 *Current Use of the Data in Compliance Examinations and Investigations* 4-20
4.2.3 *The Availability of Demographic Information* 4-23
4.2.4 *The Value of Home Mortgage Disclosure Data in Compliance Determinations and the Impact of its Loss* 4-23
4.2.5 *Delineation of Local Communities* 4-25

4.3 Use of Home Mortgage Disclosure Data by the Public and Depository Institutions 4-26

4.3.1 *Use by the Public* 4-26
4.3.2 *Use by Depository Institutions* 4-32
4.3.3 *The Debate* 4-33

. . . .

CHART S.1: Prohibited Bases Contained in Antidiscrimination Acts and Regulations vi

FIGURE 1.1: Scope of Report 1-3

FIGURE 1.2: Methodology 1-5

FIGURE 2.1: Four Hypothetical Examples of Lending in a Census Tract 2-7

FIGURE 3.1: Summary of Antidiscrimination Legislation 3-2

CHART 3.2: Compliance Requirements Contained in Antidiscrimination Acts and Regulations 3-12

CHART 3.3: Records Maintained Under Title VIII, ECOA, HMDA, CRA (For Institutions in an SMSA With Over 10 Million) 3-13

TABLE OF CONTENTS (Cont'd)

Page

FIGURE 4.1: Analysis of the Potential Uses of Mortgage Disclosure Data 4-3

FIGURE 4.2: Two-stage Process to Determine Potential Usefulness of Mortgage Disclosure Data 4-7

FIGURE 4.3: Hypothetical Example of Lending by Three Institutions . . 4-12

FIGURE 4.4: Examples of Current Procedures for Using Mortgage Disclosure Data in Determining Compliance . . . 4-22

TABLE 4.1: Number of Requests by the Public for Mortgage Disclosure Statements 4-30

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC) under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements, identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of this report is to analyze the extent to which data generated under the Home Mortgage Disclosure Act[1] are useful in determining the compliance of regulated depository institutions with antidiscrimination acts and their implementing regulations.

SCOPE

The scope of this report is defined in terms of the following three dimensions:

- Three acts and their regulations
- Three categories of users
- Two types of uses

The three pieces of legislation and their implementing regulations considered in the report are: the Fair Housing Act (Title VIII of the Civil Rights Act of 1968, referred to as Title VIII in this report)[2] and FDIC Part 338[3], FHLBB Parts 528, 531.8[4] the Equal Credit Opportunity Act (ECOA)[5] and Regulation B[6]; the Community Reinvestment Act (CRA)[7] and Community Reinvestment Act Regulations.[8] It is this set of legislation that addresses issues related to redlining and discrimination in credit for housing and to which mortgage disclosure data are potentially relevant. For purposes of this report, discrimination is defined as an unlawful real estate financing decision which has the purpose or effect of disadvantaging a borrower or prospective borrower on the basis of his or her personal characteristics, or the age of the dwelling for which financing is sought. Redlining is defined as an unlawful real estate financing decision which has the purpose or effect of disadvantaging a borrower or prospective borrower on the basis of the geographic location of the property.

Three categories of users can potentially employ home mortgage disclosure data to determine the compliance of depository institutions with the requirements of Title VIII, ECOA, CRA, and their implementing regulations. They are: the regulatory agencies, the public, and the depository institutions themselves.

Uses of disclosure data are analyzed along two dimensions. The first is an analysis of potential uses examining the compliance requirements of the acts and regulations in relation to the mortgage disclosure data and the other types of data needed to determine whether compliance requirements are being met. Following the analysis of potential uses, a discussion of the past and current use of mortgage disclosure data by the three categories of users is presented. The main emphasis is on current uses of the data by the regulatory agencies. This analysis is based upon information obtained in interviews with Federal Home Loan Bank Board and Federal Deposit Insurance Corporation personnel currently involved in compliance examinations or investigations. A thorough survey to obtain an in-depth understanding of the use of mortgage disclosure data by the public and depository institutions was beyond the scope of this study. Consequently, such uses are discussed only insofar as the information already available from other parts of the study or other sources permitted.

Not within the scope of this report was an examination of potential uses of home mortgage disclosure data, should the provisions of the Act of Regulation C[9] be changed. Instead, current provisions of the Act and Regulation C have been taken as a given.

METHODOLOGY

The methodology used in this study involved eight steps. The first five steps involved an analysis of potential uses undertaken to determine the extent to which home mortgage disclosure data used in conjunction with demographic data can help to uncover a possible pattern of noncompliance with a limited subset of compliance requirements of the acts and regulations.

These five steps were:

- Define the nature and characteristics of the home mortgage disclosure data.
- Define the requirements (i.e., the prohibited bases) of Title VIII, ECOA, CRA, and their implementing regulations.
- Define the types of demographic information available at the census tract level.
- Determine which demographic variables are relevant to analysis of compliance with the prohibited bases of Title VIII, ECOA, CRA, and their implementing regulations.
- Determine the extent to which home mortgage disclosure data, when used in conjunction with demographic information, can be helpful in detecting differential patterns of lending among census tracts, and thus the need for further investigation.

Three additional steps completed the analysis:

- Determine the need for additional categories of data (i.e., beyond mortgage disclosure data) and the types of analyses that are required before a determination of compliance with the acts and regulations can be made.
- Perform limited survey to determine how mortgage disclosure data are currently being used by the regulatory agencies to determine compliance with Title VIII, ECOA, CRA, and their implementing regulations.
- Summarize the use of home mortgage disclosure dets by the public and by the depository institutions.

Compliance Requirements: Title VIII and the Equal Credit Opportunity Act require that regulatory agencies ensure thet subject depository institutions are not, among other things, discriminating in their extensions of credit for housing based on numerous prohibited beses. These bases and their corresponding legislation are shown in Chart S.1.

PROHIBITED BASIS	Title VIII, FHLBB Pts 528,531.8, FDIC Pt 338	ECOA, Reg.B, FHLBB Pts 528, 531.8, FDIC Pt 338	FHLBB Pts 528,531.8
Race	X	X	X
Color	X	X	X
Religion	X	X	X
National Origin	X	X	X
Sex	X	X	X
Age of Dwelling			X
Location of Dwelling			X
Marital Status		X	
Age of Individual		X	
Because All or Part of Applicants' Income from Public Assistance		X	
Exercise of Right Under Consumer Credit Protection Act		X	

CHART S.1: PROHIBITED BASES CONTAINED IN ANTIDISCRIMINATION ACTS AND REGULATIONS

CRA does not provide prohibited bases, but instead requires that the regulatory agencies encourage depository institutions to help meet the credit needs of their local communities. The regulations promulgated pursuant to this Act provide 12 assessment factors for examiners to consider in assessing an institution's record. Two of these assessment factors involve the geographical distribution of mortgage lending in the institution's local community as opposed to other areas, and thus render mortgage disclosure data potentially useful in assessing an institution's record. These two factors are:

(e) the geographic distribution of the *depository institution's* credit extensions, credit applications, and credit denials;

(i) the *depository institution's* origination of residential mortgage loans, housing rehabilitation loans, home improvement loans, and small business or small farm loans within its community, or the purchase of such loans originated in its community.[10]

A special consideration of CRA is that depository institutions are encouraged to serve the credit needs of low- and moderate-income areas in their local community. In this report CRA assessment factors (e) and (i), and the special consideration given low- and moderate-income neighborhoods in the Act, are combined with the 11 prohibited bases to form 14 "compliance requirements" which serve as the basis for the analysis.

FINDINGS

Mortgage Disclosure Data: A disclosure statement prepared under the Home Mortgage Disclosure Act shows the number and amount of mortgage loans originated or purchased in a given year by an individual depository institution. Disclosure data show the amount and types (e.g., FHA, conventional) of loans and, most importantly, the geographic distribution by census tract of loans made in SMSAs in which they have offices. Mortgage disclosure statements have several limitations, in that they do not provide data on:

- Mortgage lending outside of SMSAs
- All lenders within an SMSA
- Individual loans
- Applications
- Aggregate portfolio (i.e., debt held)
- Deposits.

These limitations restrict the scope of use of mortgage disclosure data in determining compliance with antidiscrimination acts and regulations.

Analysis of Potential Uses: The analysis of potential uses shows conclusively that mortgage disclosure data, used alone, cannot establish the existence of redlining or discrimination by a depository institution or group of depository institutions. Data on the demand for loans and the efforts by the depository institution(s) to seek loans must be assessed before such conclusions can be reached. The analysis does show that mortgage disclosure data can serve in a limited role -- that of an alerting mechanism -- to detect differential patterns of lending among various census tracts. This mechanism can alert a user to the possible need for further investigation to determine compliance.

The findings of the analysis of potential uses are as follows:

- Home mortgage disclosure data used alone do not provide a sufficient basis for determining the compliance of depository institutions with antidiscrimination acts and regulations.
- Home mortgage disclosure data do provide an alerting mechanism to detect differential patterns of lending among census tracts which may indicate the need for further investigation to determine if an institution has violated certain of the compliance requirements.
- The use of home mortgage disclosure data as an alerting mechanism to uncover possible violations of compliance requirements varies depending on the nature of the compliance requirement and the availability of demographic data. Thus, depending on these variables, home mortgage disclosure data are:
  - directly useful because the requirement is geographically defined; or
  - generally useful when combined with demographic information; or
  - generally not useful because demographic information is not meaningful at the census tract level.

Use by Regulatory Agencies: The use by regulatory agencies is important to consider because it is they who have the responsibility and authority to determine compliance with the acts and regulations. In addressing the use by the regulatory agencies, it should be noted that the Home Mortgage Disclosure Act was not intended to be an enforcement tool, but rather a means to learn how particular depository institutions invest deposits entrusted to them.[11] Our survey reveals, however, that the regulatory agencies have been using home mortgage disclosure data as a part of compliance examinations and civil rights examinations from the time Regulation C became effective. The passage of the Community Reinvestment Act and the promulgation of the Community Reinvestment Act regulations, however, have added impetus to this use. CRA's mandate that the regulatory agencies encourage regulated depository institutions to serve the credit needs of their local communities and assessment factors (e) and (i) which require evaluation of an institution's geographic distribution of credit, extended the use of home mortgage disclosure data during compliance examinations.

In compliance examinations and investigations, these data essentially serve the role of an alerting mechanism to detect differential patterns of lending among census tracts which when weighted with other information may suggest the need for further investigation. Although the regulatory agencies could obtain raw data on the geographical pattern of lending from other sources (e.g., loan application rostar) such data are not aggregated at the census tract level.

The findings from the survey of actual use by the regulatory agencies are as follows:

- The regulatory agencies currently use home mortgage disclosure data as an integral part of their compliance examinations; and investigations and procedures for use differ among various regions and districts.
- If mortgage disclosure data were no longer available, an alternative means for obtaining similar data would be needed to support compliance examinations and investigations.

Use by the Public and Depository Institutions: The use of mortgage disclosure data by citizens and public officials (other than the regulatory agencies) is also an important consideration because the underlying rationale of the Home Mortgage Disclosure Act was to provide citizens and public officials with lending information to improve their ability to discourage the practice of redlining or the refusal to lend mortgage money in older urban neighborhoods.[12] The public does not bear the responsibility for determining compliance; and, indeed, they do not have the requisite information on the demand for loans with which to reach such a determination. Our limited survey and study show that most depository institutions are strongly opposed to the Act on the grounds of few requests by the public. Consumer groups have used these data in certain areas, and these groups feel equally strongly that such disclosure data are essential.

The findings from study of the actual uses by the public and perceptions of the depository institutions are as follows:

- Mortgage disclosure statements are the only means by which the interested public can review the geographic pattern of mortgage and home improvement lending by depository institutions.
- The mortgage disclosure statements are being used by public interest groups in a number of the 270 SMSAs, and these groups believe strongly that these statements are a necessary and valuable tool in identifying and detering redlining and discrimination.
- A significant percentage of the mortgage disclosure statements go unused by the public.

CHAPTER 1

INTRODUCTION

1.1 PURPOSE

The purpose of this report is to analyze the extent to which data generated under the Home Mortgage Disclosure Act are useful in determining the compliance of regulated depository institutions with antidiscrimination acts and their implementing regulations.

1.2 SCOPE

The scope of this report is defined in terms of the following three dimensions which are discussed in the sections that follow:

- Three acts and their regulations
- Three categories of users
- Two types of uses

1.2.1 The Acts and Regulations Considered

In addition to the Home Mortgage Disclosure Act, three acts and their implementing regulations are considered in this report. These are: The Fair Housing Act (Title VIII of the Civil Rights Act of 1968, hereafter referred to as Title VIII) and FDIC Part 338, FHLBB Parts 528, 531.8; the Equal Credit Opportunity Act and Regulation B; the Community Reinvestment Act (Title VIII of The Housing and Community Development Act of 1977 hereafter referred to as the Community Reinvestment Act) and Community Reinvestment Act Regulations. It is this legislation that addresses issues related to discrimination in credit for housing and to which mortgage disclosure data are potentially relevant.

Passage of the Home Mortgage Disclosure Act in 1975 marked neither the beginning nor the end of legislative activity designed to address discrimination in lending. In fact, this Act is but one small part of a broader legislative [illegible] past decade. HMDA both [illegible] a report analyzing the use of [illegible] relevant regulations [illegible] developments.

[illegible]

[illegible] mortgage disclosure [illegible] with the requirements [illegible] regulations. They are: [illegible] and the depository [illegible]

[illegible]

[illegible] three relevant [illegible] and limitations [illegible]. This approach [illegible] data is centrally [illegible] other data (e.g., [illegible].

[illegible] is performed along two dimensions. [illegible] report is an analysis of potential [illegible] requirements of the acts [illegible] data and the other types of data needed [illegible] are being met. [illegible] mortgage disclosure data are [illegible]. In addition, the need to correlate these data with other types of data as a prerequisite to an assessment of compliance is defined.

The second dimension consists of a discussion of the past and current use of mortgage disclosure data by the three categories of users. In this section, the degree to which the data necessary to determine compliance are available to the three categories of users — the regulatory agencies, the public, and the depository institutions — is examined. The main emphasis is on current uses of the data by the regulatory agencies. This analysis is based upon information obtained in interviews with Federal Home Loan Bank Board and Federal Deposit Insurance Corporation personnel currently involved in compliance examinations or investigations. The objective of this study of actual uses by the regulatory agencies was twofold. The first was to supplement the analysis of potential uses with an understanding of the ways in which these data are currently being used in compliance examinations or investigations. The second was to determine the impact of discontinuation of the disclosure statements on these activities. An in-depth survey to obtain a thorough understanding of the use of mortgage disclosure data by the public and depository institutions was outside the scope of this report. Consequently, such uses are discussed only insofar as the information already available from other parts of the study or other sources permitted.

An examination of the uses of home mortgage disclosure data should the provisions of the Act and/or Regulation C be changed was not within the scope of this report. Instead, current provisions of the Act and Regulation C have been taken as a given. Observations on the impact of changes to the Act and Regulation C are presented in a companion report of this study.[13] The scope of the compliance analysis and this report is summarized in Figure 1.1.

	Regulatory Agencies	Consumer Groups	Depository Institutions
Potential Uses	*	*	*
Actual Uses	*	+	+
Uses if the Act and/or Regulation C were Changed	-	-	-

Legend
* Primary Focus of Report
+ Treated When Information Available
- Not Treated in Report

FIGURE 1.1: SCOPE OF REPORT

Thus, the results of our analysis show how home mortgage disclosure data 1. can be used, and 2 can [illegible] used. Conclusions are reached regarding the extent of mortgage disclosure data's usefulness and what impact discontinuation of the Act entirely would have on compliance activities, but no recommendations are made or implied regarding extension of the Home Mortgage Disclosure Act and Regulation C. Such recommendations must derive from a complementary assessment of the cost of preparing the disclosure data as well as possible alternatives to it. These issues are discussed in companion reports.[14]

1.3 METHODOLOGY

The methodology used in this study is shown in Figure 1.2. Eight steps were involved. The first five steps are an analysis of potential uses of the data. This analysis was undertaken to determine the extent to which home mortgage disclosure data, when used in conjunction with demographic information, can be used to surface a possible pattern of non-compliance with a limited subset of the prohibited bases of the acts and regulations. As shown in the figure, the first step was to define the nature and characteristics of the home mortgage disclosure data. The second step was to define the compliance requirements of Title VIII, ECOA, CRA, and their implementing regulations. The third step was to define the types of demographic information available at the census tract level. The fourth step was to determine which of the demographic variables were relevant to analysis of the compliance requirements associated with Title VIII, ECOA, CRA, and their implementing regulations. The fifth step was to determine the extent to which home mortgage disclosure data, when used in conjunction with demographic information, can be helpful in detecting possible differentials in the pattern of lending among census tracts. In this step, the limitations of the usefulness of the home mortgage disclosure data in determining compliance with the acts and regulations were defined.

In the sixth step, a determination was made of the additional categories of data (i.e., beyond mortgage disclosure data) that are needed and the types of analysis that are required before a determination of compliance with the

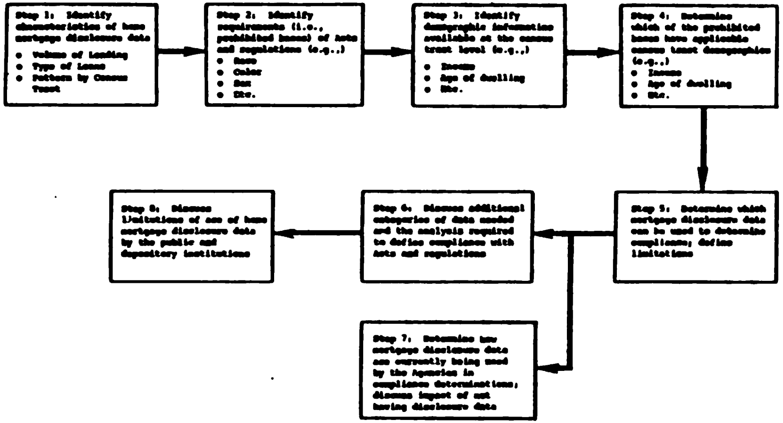
Step 1: Identify characteristics of home mortgage disclosure data
• Volume of Lending
• Type of Loans
• Pattern by Census Tract
Step 2: Identify requirements (i.e., prohibited bases) of Acts and regulations (e.g.,)
• Race
• Color
• Sex
• Etc.
Step 3: Identify demographic information available at the census tract level (e.g.,)
• Income
• Age of dwelling
• Etc.
Step 4: Determine which of the prohibited bases have applicable census tract demographics (e.g.,)
• Income
• Age of dwelling
• Etc.
Step 5: Determine which mortgage disclosure data can be used to determine compliance; define limitations
Step 6: Discuss additional categories of data needed and the analysis required to define compliance with Acts and regulations
Step 7: Determine how mortgage disclosure data are currently being used by the Agencies in compliance determinations; discuss impact of not having disclosure data
Step 8: Discuss limitations of use of home mortgage disclosure data by the public and depository institutions

FIGURE 1.2: METHODOLOGY

[illegible]

- [illegible]
- [illegible]
- [illegible]

[illegible] exempt from the Home Mortgage Disclosure Act are depository institutions which neither [illegible] a home office or branch office in a standard metropolitan statistical area, or with total assets as of the last day of the [illegible] fiscal year of [illegible] million or less. In addition, any state-chartered depository institution subject to the mortgage loan disclosure law of a state that the regulatory agencies determine contains substantially [illegible] similar to those imposed under the Act and adequate provisions for enforcement [illegible] is exempt from reporting under the Act. Although some differences exist between the disclosure statements prepared under the Act and those prepared under state authority. For purposes of this analysis, these will be assumed to be identical. Absent one of these exemptions, a depository institution is required to comply with the provisions set forth in the Act.

[illegible] Reporting Requirements

The Act requires that mortgage loans originated by the institution and purchased by the institution be reported separately. A second major classification separates loans made on property within the SMSA from those made on property outside the SMSA. Within each of the above classifications, loans are to be reported according to the following categories:

- FHA, FmHA or VA loans (except on multi-family dwellings)
- Other residential mortgage loans - "Conventional" (except on multi-family dwellings)
- Total home improvement loans (except on multi-family dwellings)
- Total mortgage loans on multi-family dwellings
- Non-occupant loans (except on multi-family dwellings).

The most important aspect of the reporting requirements of the Act involves aggregation of the mortgage loan data by census tracts The Act and Regulation C require that each depository institution aggregate, separately for each SMSA in which it has a home or branch office, its mortgage loan data by the census tract in which the principal residential real property securing the residential mortgage loan is located. These data on loans are to be set forth both by number of loans and principal amount of loans made within an SMSA. Only those loans relating to real property inside the SMSA are itemized by census tract. All other loans are reported together in Section Two of the report as "other loans located outside the relevant SMSA."

An exemption from the requirement that loans be itemized by census tract is the case of residential real property located in an SMSA but not tracted on the census maps. In this circumstance, loans are to be reported by the zip code in which the residential real property is located.

2.1.3 Availability Requirements

The Home Mortgage Disclosure Act requires that each depository institution subject to the Act make its disclosure statement available for public inspection and copying in at least one office in the SMSA. The disclosure statements are to be prepared within 90 days of the end of the institution's fiscal year, and the institution is required to notify depositors that the disclosure statement is available. In addition, Regulation C requires that each disclosure statement be maintained and made available for a period of five years.

2.2 WHAT [illegible] DATA CAN SHOW

For an institution subject to the Act, the disclosure statement can show the volume of mortgage lending, the type of mortgage lending, and the geographical pattern of lending by census tracts.

2.2.1 Volume of Mortgage Lending

A disclosure statement shows the number and amount of mortgage loans originated or purchased in a given year by an individual depository institution for properties located within a specified SMSA. Thus, the data in a single disclosure statement can only show the volume of mortgage lending for:

- A single institution
- A single year
- A single SMSA

The limitations imposed by these aspects of the Act are discussed in Section 2.3.

2.2.2 Types of Mortgage Lending

A disclosure statement shows the various types of mortgage loans that were originated or purchased in a given year by an individual institution. Mortgage loans are categorized according to the type of loans (e.g., FHA, conventional, etc.), type of dwelling (i.e., 1-4 family, multi-family), occupancy, and purpose (i.e., home improvement or property purchased). Thus, a determination of the institution's lending pattern in terms of these categories is possible.

2.2.3 Geographical Pattern of Lending by Census Tract

The aggregation of mortgage loan data by census tracts in disclosure statements distinguishes this type of data from all other sources and forms of information on mortgage loans. No other source exists for the regulatory agencies to obtain mortgage data already aggregated on the basis of small geographic areas for which demographic information is available, or for the public to obtain this data in raw or aggregated form.

Whether examined on the disclosure statement itself, or transposed onto an SMSA map, these data provide a unique basis for depicting the geographic pattern of mortgage lending and home improvement loans within the SMSA. Although aggregation of the data by census tracts pose limitations in judging lending patterns on a "neighborhood" basis, the fact that the data are in this form emerges as the central consideration in its use in determining compliance with the other antidiscrimination acts and regulations.

2.3 WHAT THE DATA DO NOT SHOW

The following discussion of what the data do not show is presented in four sections. The first three sections discuss limitations inherent in the data currently required under the Act. These limitations relate to the form, completeness, and accuracy of the data, and impose limits on the conclusions users can draw from it. The fourth section looks briefly at the limitations that the absence of data on the demand for loans and on the lending in non-SMSA areas impose on the degree to which mortgage disclosure data can be used to determine compliance.

2.3.1 Limitations of the Form of the Data

Three aspects of the form of mortgage disclosure date limit its use in determining discrimination in lending. These are:

- Mortgage Loan Originations and Purchases for a Single Year: A disclosure statement shows mortgage originations and purchases in only one year and shows nothing about mortgage debt secured by property in a specific area
- Geographic Coverage: A disclosure statement shows lending by census tracts rather than communities, neighborhoods, or market areas
- Aggregated Loans: A disclosure statement shows aggregated loans rather than individual loans.

Mortgage Loan Originations and Purchases for a Single Year: A disclosure statement provides information on the mortgage loan originations or purchases within a single fiscal year. Consequently, a depository institution's

Each annual disclosure statement shows the volume of lending in each census tract during its most recent fiscal year, but it does not reflect the lending in previous years or the aggregate volume of mortgage loans currently held in each census tract. The pattern of lending in previous years can be determined from the previous disclosure statements, but no mechanism exists to assess the total volume of mortgage loans currently held by the depository institutions. Thus, although a depository institution could have sold many of its loans in a given geographic area, this situation would not be reflected in the disclosure statements of the institution.

The inherent limitations of the mortgage disclosure data, as well as the complexity of the judgments that can result from them, is well illustrated by the four hypothetical examples shown in Figure 2.1. In the example, the mortgage loan originations, purchases, and sales by four institutions in a common census tract in two consecutive years are shown. (Assume for purposes of illustration that the loans and properties are equivalent, and the census tract is in the delineated local community of all four institutions.)

Institution A originated 20 mortgage loans in each year, purchased or sold none, and at the end of the second year held all 40 mortgage loans. Institution B originated no loans in either year, purchased 20 loans in each year, sold none, and at the end of the second year held all 40 loans. Institution C originated 20 loans in each year, but sold them and purchased none. Thus, institution C held no loans at the end of the second year. Institution D originated 40 loans in the first year and 10 in the second year, purchased and sold none, and held 50 loans at the end of the second year.

Several observations can be made based on these data:

- The disclosure statements for institutions A and C will be identical for both years but at the end of the second year A holds 40 loans and C holds none. This illustrates that the lending behavior of two institutions can appear identical on the disclosure statements but can be vastly different in the amount of their continuing debt held.

INSTITUTION	YEAR 1	YEAR 2
A.	Originated 20 loans	Originated 20 loans
	Purchased 0 loans	Purchased 0 loans
	Sold 0 loans	Sold 0 loans
	Held 20 loans	Held 40 loans
B.	Originated 0 loans	Originated 0 loans
	Purchased 20 loans	purchased 20 loans
	Sold 0 loans	Sold 0 loans
	Held 20 loans	Held 40 loans
C.	Originated 20 loans	Originated 20 loans
	Purchased 0 loans	Purchased 0 loans
	Sold 20 loans	Sold 20 loans
	Held 0 loans	Held 0 loans
D.	Originated 40 loans	Originated 10 loans
	Purchased 0 loans	Purchased 0 loans
	Sold 0 loans	Sold 0 loans
	Held 40 loans	Held 50 loans

FIGURE 2.1: FOUR HYPOTHETICAL EXAMPLES OF LENDING IN A CENSUS TRACT

- The disclosure statements for institutions A and B will show A originating 20 loans in each year and B purchasing 20 loans in each year. Both hold 40 loans in the census tract at the end of the second year. This raises a judgmental issue regarding the equivalency of purchases and originations.

- The disclosure statement of institution D for the second year shows 10 loans originated. Thus, institution D appears less committed to lending when compared with the second year disclosure statements of the other three institutions. However, when the previous year along with the debt held is considered, institution D appears to have the strongest commitment to lending. This raises the issue of whether lending and debt held from previous years are considerations affecting a single year's lending. It also illustrates that the disclosure statement for a single year's lending shows neither.

Although these four examples of lending are hypothetical, they do provide a vivid illustration of two of the limitations of the origination and purchase data contained in a mortgage disclosure statement. A disclosure statement shows only originations and purchases for a one-year period, and these data reveal nothing about debt held.

Geographic Coverage: The Act and Regulation C require that data on loans be aggregated by census tract. According to the County and City Data Book 1972, "census tracts are small areas into which large cities and their adjacent areas have been divided for statistical purposes. Tract boundries... were generally designed to achieve some uniformity of population characteristics, economic status, and living conditions. The average tract has about 4,000 residents."[15] As of 1970, there were 321,300 census tracts in the United States and Puerto Rico.

Thus, although not arbitrary in origin, census tracts do not necessarily circumscribe a homogeneous unit of population. That is, a single census tract may contain both lower and upper income residents, blacks and whites, high and low quality housing stock. The problem this creates for the individual using disclosure data is that knowledge of the volume of lending in a particular census tract does not necessarily reveal characteristics of the subject properties or individuals actually receiving the loans.

These limitations imposed by census tract reporting are multiplied by the extensive use of demographic information obtained from the 1970 census which is now 10 years old. Although updated information is available in some geographic areas, these data are not of a standard format and often include only some of the variables of interest. Thus, knowledge of the pattern of lending in a census tract does not necessarily imply knowledge of either the overall census tract level characteristics of the recipients and properties, or the characteristics of individual loan recipients and properties.

These observations on the limitations of census tracts are not intended to suggest that census tracts are not the optimal basis for arraying loans on disclosure statements In fact, census tracts are the only geographical unit for which adequate geocoding tools exist. Although neighborhoods, a totally homogenous unit of population, might seem in theory to be a more attractive basis on which to prepare disclosure statements, in practice, this basis is not feasible. No standard definitions of neighborhoods exist, nor do tools suitable to geocoding loans to neighborhoods.

Aggregated Loans: A disclosure statement shows aggregated loans rather than individual loans. Because the implied purpose of the Act is to combat geographic discrimination, the mortgage loan data are presented by census tract on an aggregated basis rather than on an individual loan basis. Consequently, the mortgage disclosure data can, at best, serve only to show lending and lending differences at the aggregate census tract level. However, these data reveal nothing about the characteristics of individual applicants or borrowers.

2.3.2 Completeness

Not all categories of mortgage lenders are subject to the requirements of the Act. Those not covered include: depository institutions with assets under $10 million or no office in an SMSA, insurance companies, mortgage bankers, and private lenders. These categories of mortgage lenders not covered by the Act are responsible for a substantial percentage of mortgage lending activity. Results from the Completeness Phase of the present study, for example, indicate most recent disclosure statement shows the volume of lending in each census tract during its last fiscal year, but it does not reflect the lending in previous years or the aggregate volume of mortgage loans currently held in each census tract. The pattern of lending in previous years can be determined from the previous disclosure statements but no mechanism exists to show the total volume of mortgage loans currently held by the depository institutions. Thus, although a depository institution could have sold many of its loans in a given geographic area, this situation would not be reflected on the disclosure statements of the institution.

The inherent limitations of the mortgage disclosure data, as well as the complexity of the judgments that can result from them, is well illustrated by the four hypothetical examples shown in Figure 2.1. In the example, the mortgage loan originations purchases, and sales by four institutions in a common census tract in two consecutive years are shown. (Assume for purposes of illustration that the loans and properties are equivalent, and the census tract is in the delineated local community of all four institutions.)

Institution A originated 20 mortgage loans in each year, purchased or sold none, and at the end of the second year held all 40 mortgage loans. Institution [illegible] originated no loans in either year, purchased 20 loans in each year, sold none, and at the end of the second year held all 40 loans. Institution C originated 20 loans in each year, but sold them and purchased none. Thus, institution C held no loans at the end of the second year. Institution D originated 40 loans in the first year and 10 in the second year, purchased and sold none, and held 50 loans at the and of the second year.

Several observations can be made based on these data:

- The disclosure statements for institutions A and C will be identical for both years, but at the and of the second year A holds 40 loans and C holds none. This illustrates that the lending behavior of two institutions can appear identical on the disclosure statements but can be vastly different in the amount of their continuing debt held.

INSTITUTION	YEAR 1	YEAR 2
A.	Originated 20 loans	Originated 20 loans
	Purchased 0 loans	Purchased 0 loans
	Sold 0 loans	Sold 0 loans
	Held 20 loans	Held 40 loans
B.	Originated 0 loans	Originated 0 loans
	Purchased 20 loans	purchased 20 loans
	Sold 0 loans	Sold 0 loans
	Held 20 loans	Held 40 loans
C.	Originated 20 loans	Originated 20 loans
	Purchased 0 loans	Purchased 0 loans
	Sold 20 loans	Sold 20 loans
	Held 0 loans	Held 0 loans
D.	Originated 40 loans	Originated 10 loans
	Purchased 0 loans	Purchased 0 loans
	Sold 0 loans	Sold 0 loans
	Held 40 loans	Held 50 loans

FIGURE 2.1: FOUR HYPOTHETICAL EXAMPLES OF LENDING IN A CENSUS TRACT

Thus, the results of our analysis show how home mortgage disclosure data 1) can be used, and 2) are being used. Conclusions are reached regarding the extent of mortgage disclosure data's usefulness and what impact discontinuation of the Act entirely would have on compliance activities but no recommendations are made or implied regarding retention of the Home Mortgage Disclosure Act and Regulation C. Such recommendations must derive from a complementary assessment of the cost of preparing the disclosure data as well as possible alternatives to it. These issues are discussed in companion reports.[14]

1.3 METHODOLOGY

The methodology used in this study is shown in Figure 1.2. Eight steps were involved. The first five steps are an analysis of potential uses of the data. This analysis was undertaken to determine the extent to which home mortgage disclosure data, when used in conjunction with demographic information can be used to surface a possible pattern of non-compliance with a limited subset of the prohibited bases of the acts and regulations. As shown in the figure, the first step was to define the nature and characteristics of the home mortgage disclosure data. The second step was to define the compliance requirements of Title VIII, ECOA, CRA, and their implementing regulations. The third step was to define the types of demographic information available at the census tract level. The fourth step was to determine which of the demographic variables were relevant to analysis of the compliance requirements associated with Title VIII, ECOA, CRA, and their implementing regulations. The fifth step was to determine the extent to which home mortgage disclosure data, when used in conjunction with demographic information, can be helpful in detecting possible differentials in the pattern of lending among census tracts In this step, the limitations of the usefulness of the home mortgage disclosure data in determining compliance with the acts and regulations were defined.

In the sixth step, a determination was made of the additional categories of data (i.e., beyond mortgage disclosure data) that are needed and the types of analysis that are required before a determination of compliance with the

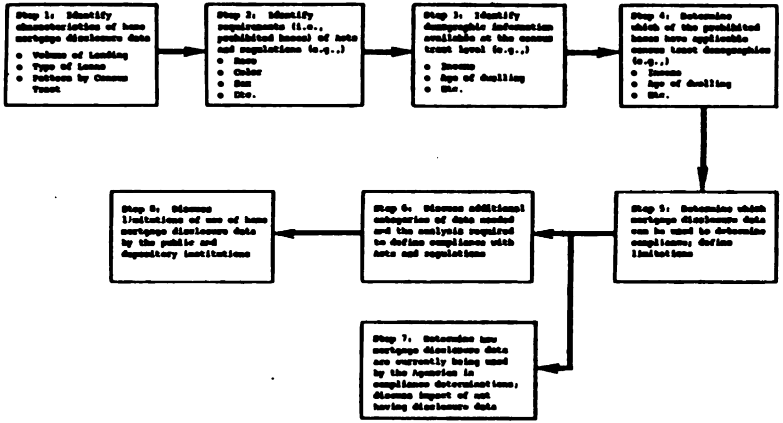
Step 1: Identify characteristics of home mortgage disclosure data
• Volume of Lending
• Type of Loans
• Pattern by Census Tract
Step 2: Identify requirements (i.e., prohibited bases) of Acts and regulations (e.g.,)
• Race
• Color
• Sex
• Etc.
Step 3: Identify demographic information available at the census tract level (e.g.,)
• Income
• Age of dwelling
• Etc.
Step 4: Determine which of the prohibited bases have applicable census tract demographics (e.g.,)
• Income
• Age of dwelling
• Etc.
Step 5: Determine which mortgage disclosure data can be used to determine compliance; define limitations
Step 6: Discuss additional categories of data needed and the analysis required to define compliance with Acts and regulations
Step 7: Determine how mortgage disclosure data are currently being used by the Agencies in compliance determinations; discuss impact of not having disclosure data
Step 8: Discuss limitations of use of home mortgage disclosure data by the public and depository institutions

FIGURE 1.2: METHODOLOGY

CHAPTER 2

HOME MORTGAGE DISCLOSURE ACT DATA

This chapter presents a brief summary of the Home Mortgage Disclosure Act and Regulation C with particular emphasis on the scope, content, and limitations of the mortgage loan data included in disclosure statements First the requirements of the Act and Regulation C are outlined, spelling out which institutions are subject to disclosure reporting and delineating the specific categories of data to be reported. The second section indicates what the disclosure data can show about mortgage lending. The final section indicates what the disclosure data cannot show about mortgage lending. Taken together, these three sections provide a definitive basis for an analysis of the potential uses of home mortgage disclosure data to determine compliance with antidiscrimination acts and regulations.

2.1 REQUIREMENTS OF THE ACT AND REGULATION C

This section presents the requirements of the Act and Regulation C under the following topics:

- Institutions Subject to the Act
- Reporting Requirements
- Availability Requirements

2.1.1 Institutions Subject to the Act

Of all lenders, only depository institutions are subject to the reporting requirements of the Act and Regulation C. A depository institution is defined by the Act as, "...any commercial bank, savings bank, savings and loan association, or homestead association, (including cooperative banks) or credit union which makes federally related mortgage loans as determined by

[illegible]

- [illegible]
- [illegible]
- [illegible]

[illegible] In addition, [illegible] and adequate provisions for enforcement [illegible] under the Act. Although some differences exist between the disclosure statements prepared under the Act [illegible] For purposes of this analysis [illegible] with the provisions set forth in the Act.

[illegible] Reporting Requirements

The Act requires that [illegible] by the institution and purchased by the institution be reported separately. A second major classification separates loans made on property [illegible] the SMSA from those made on property outside the SMSA. [illegible] each of the above classifications, loans are to be reported according to the following categories

- FHA, FmHA or VA loans (except on multi-family dwellings)
- Other residential mortgage loans - "Conventional" (except on multi-family dwellings)
- Total home improvement loans (except on multi-family dwellings)
- Total mortgage loans on multi-family dwellings
- Non-occupant loans (except on multi-family dwellings).

The most important aspect of the reporting requirements of the Act involves aggregation of the mortgage loan data by census tracts The Act and Regulation C require that each depository institution aggregate, separately for each SMSA in which it has a home or branch office, its mortgage loan data by the census tract in which the principal residential real property securing the residential mortgage loan is located. These data on loans are to be set forth both by number of loans and principal amount of loans made within an SMSA. Only those loans relating to real property inside the SMSA are itemized by census tract. All other loans are reported together in Section Two of the report as "other loans located outside the relevant SMSA."

An exemption from the requirement that loans be itemized by census tract is the case of residential real property located in an SMSA but not tracted on the census maps. In this circumstance, loans are to be reported by the zip code in which the residential real property is located.

2.1.3 Availability Requirements

The Home Mortgage Disclosure Act requires that each depository institution subject to the Act make its disclosure statement available for public inspection and copying in at least one office in the SMSA. The disclosure statements are to be prepared within 90 days of the end of the institution's fiscal year, and the institution is required to notify depositors that the disclosure statement is available. In addition, Regulation C requires that each disclosure statement be maintained and made available for a period of five years.

2.2 [illegible]

[illegible] institution subject to the Act, the disclosure statement can show the volume of mortgage lending, the type of mortgage lending, and the geographical pattern of lending by census tracts.

2.2.1 Volume of Mortgage Lending

A disclosure statement shows the number and amount of mortgage loans originated or purchased in a given year by an individual depository institution for properties located within a specified SMSA. Thus, the data in a single disclosure statement can only show the volume of mortgage lending for:

- a single institution
- a single year
- a single SMSA

The limitations imposed by these aspects of the Act are discussed in Section 2.3.

2.2.2 Types of Mortgage Lending

A disclosure statement shows the various types of mortgage loans that were originated or purchased in a given year by an individual institution. Mortgage loans are categorized according to the type of loans (e.g., FHA, Conventional, etc.), type of dwelling (i.e., 1-4 family, multi-family), occupancy, and purpose (i.e., home improvement or property purchased). Thus, a determination of the institution's lending pattern in terms of these categories is possible.

2.2.3 Geographical Pattern of Lending by Census Tract

The aggregation of mortgage loan data by census tracts in disclosure statements distinguishes this type of data from all other sources and forms of information on mortgage loans. No other source exists for the regulatory agencies to obtain mortgage data already aggregated on the basis of small geographic areas for which demographic information is available, or for the public to obtain this data in raw or aggregated form.

Whether examined on the disclosure statement itself, or transposed onto an SMSA map, these data provide a unique basis for depicting the geographic pattern of mortgage lending and home improvement loans within the SMSA. Although aggregation of the data by census tracts pose limitations in judging lending patterns on a "neighborhood" basis, the fact that the data are in this form emerges as the central consideration in its use in determining compliance with the other antidiscrimination acts and regulations.

2.3 WHAT THE DATA DO NOT SHOW

The following discussion of what the data do not show is presented in four sections. The first three sections discuss limitations inherent in the data currently required under the Act These limitations relate to the form completeness, and accuracy of the data, and impose limits on the conclusions users can draw from it. The fourth section looks briefly at the limitations that the absence of data on the demand for loans and on the lending in non-SMSA areas impose on the degree to which mortgage disclosure data can be used to determine compliance.

2.3.1 Limitations of the Form of the Data

Three aspects of the form of mortgage disclosure data limit its use in determining discrimination in lending. These are:

- **Mortgage Loan Originations and Purchases for a Single Year:** A disclosure statement shows mortgage originations and purchases in only one year and shows nothing about mortgage debt secured by property in a specific area
- **Geographic Coverage:** A disclosure statement shows lending by census tracts rather than communities, neighborhoods, or market areas
- **Aggregated Loans:** A disclosure statement shows aggregated loans rather than individual loans.

Mortgage Loan Originations and Purchases for a Single Year: A disclosure statement provides information on the mortgage loan originations or purchases within a single fiscal year. Consequently, a depository institution's most recent disclosure statement shows the volume of lending in each census tract during the last fiscal year, but it does not reflect the lending in previous years or the aggregate volume of mortgage loans currently held in each census tract. The pattern of lending in previous years can be determined from the previous disclosure statements, but no mechanism exists to show the total volume of mortgage loans currently held by the depository institutions. Thus, although a depository institution could have sold many of its loans in a given geographic area, this situation would not be reflected on the disclosure statements of the institution.

The inherent limitations of the mortgage disclosure data, as well as the complexity of the judgments that can result from them, is well illustrated by the four hypothetical examples shown in Figure 2.1. In the example, the mortgage loan originations, purchases, and sales by four institutions in a single census tract in two consecutive years are shown. (Assume for purposes of illustration that the loans and properties are equivalent, and the census tract is in the delineated local community of all four institutions.)

Institution A originated 20 mortgage loans in each year, purchased or sold none, and at the end of the second year held all 40 mortgage loans. Institution B originated no loans in either year, purchased 20 loans in each year, sold none, and at the end of the second year held all 40 loans. Institution C originated 20 loans in each year, but sold them and purchased none. Thus, institution C held no loans at the end of the second year. Institution D originated 40 loans in the first year and 10 in the second year, purchased and sold none, and held 50 loans at the end of the second year.

Several observations can be made based on these data:

- The disclosure statements for institutions A and C will be identical for both years, but at the end of the second year A holds 40 loans and C holds none. This illustrates that the lending behavior of two institutions can appear identical on the disclosure statements but can be vastly different in the amount of their continuing debt held.

INSTITUTION	YEAR 1		YEAR 2	
A.	Originated	20 loans	Originated	20 loans
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	Held	20 loans	Held	40 loans
B.	Originated	0 loans	Originated	0 loans
	Purchased	20 loans	purchased	20 loans
	Sold	0 loans	Sold	0 loans
	Held	20 loans	Held	40 loans
C.	Originated	20 loans	Originated	20 loans
	Purchased	0 loans	Purchased	0 loans
	Sold	20 loans	Sold	20 loans
	Held	0 loans	Held	0 loans
D.	Originated	40 loans	Originated	10 loans
	Purchased	0 loans	Purchased	0 loans
	Sold	0 loans	Sold	0 loans
	Held	40 loans	Held	50 loans

FIGURE 2.1: FOUR HYPOTHETICAL EXAMPLES OF LENDING IN A CENSUS TRACT

- The disclosure statements for institution A and B will show A originating 20 loans in each year and B purchasing 20 loans in each year. Both hold 40 loans in the census tract at the end of the second year. This raises a judgmental issue regarding the equivalency of purchases and originations.

- The disclosure statement of institution D for the second year shows 10 loans originated. Thus, institution D appears less committed to lending when compared with the second year disclosure statements of the other three institutions. However, when the previous year along with the debt held is considered, institution D appears to have the strongest commitment to lending. This raises the issue of whether lending and debt held from previous years are considerations offsetting a single year's lending. It also illustrates that the disclosure statement for a single year's lending shows neither.

Although these four examples of lending are hypothetical, they do provide a vivid illustration of two of the limitations of the origination and purchase data contained in a mortgage disclosure statement. A disclosure statement shows only originations and purchases for a one-year period, and these data reveal nothing about debt held.

Geographic Coverage: The Act and Regulation C require that data on loans be aggregated by census tract. According to the County and City Data Book 1972, "census tracts are small areas into which large cities and their adjacent areas have been divided for statistical purposes. Tract boundries... were generally designed to achieve some uniformity of population characteristics, economic status, and living conditions. The average tract has about 4,000 residents."[15] As of 1970, there were 321,000 census tracts in the United States and Puerto Rico.

Thus, although not arbitrary in origin, census tracts do not necessarily circumscribe a homogeneous unit of population. That is, a single census tract may contain both lower and upper income residents blacks and whites, high and low quality housing stock. The problem this creates for the individual using disclosure data is that knowledge of the volume of lending in a particular census tract does not necessarily reveal characteristics of the subject properties or individuals actually receiving the loans.

These limitations imposed by census tract reporting are multiplied by the extensive use of demographic information obtained from the 1970 census which is now 10 years old. Although updated information is available in some geographic areas, these data are not of a standard format and often include only some of the variables of interest. Thus, knowledge of the pattern of lending in a census tract does not necessarily imply knowledge of either the overall census tract level characteristics of the recipients and properties, or the characteristics of individual loan recipients and properties.

These observations on the limitations of census tracts are not intended to suggest that census tracts are not the optimal basis for arraying loans on disclosure statements. In fact, census tracts are the only geographical unit for which adequate geocoding tools exist. Although neighborhoods, a totally homogenous unit of population, might seem in theory to be a more attractive basis on which to prepare disclosure statements, in practice, this basis is not feasible. No standard definitions of neighborhoods exist, nor do tools suitable to geocoding loans to neighborhoods.

Aggregated Loans: A disclosure statement shows aggregated loans rather than individual loans. Because the implied purpose of the Act is to combat geographic discrimination, the mortgage loan data are presented by census tract on an aggregated basis rather than on an individual loan basis. Consequently, the mortgage disclosure data can, at best, serve only to show lending and lending differences at the aggregate census tract level. However, these data reveal nothing about the characteristics of individual applicants or borrowers.

2.3.2 Completeness

Not all categories of mortgage lenders are subject to the requirements of the Act Those not covered include: depository institutions with assets under $10 million or no office in an SMSA, insurance companies, mortgage bankers, and private lenders. These categories of mortgage lenders not covered by the Act are responsible for a substantial percentage of mortgage lending activity. Results from the Completeness Phase of the present study, for example, indicate that in San Diego, [illegible] percent of all mortgage loans were originated by institutions or individuals not subject to Federal or state reporting requirements.[6]

Thus, a disclosure statement shows the lending pattern of an individual depository institution, but it reveals nothing about the competition or supply of credit from other lenders (both those subject and not subject to the Act) for the loans made in a particular census tract.

2.3.3 Accuracy

The accuracy of mortgage disclosure statements imposes an obvious potential limitation on their use in determining compliance with antidiscrimination acts and regulations. To be at all useful, the mortgage loan information in disclosure statements must accurately reflect the intended criteria for including and excluding certain types of loans and faithfully represent the true lending of the institution. Although Phase II, Accuracy of the HMDA study has identified inconsistencies in disclosure statements, for the purpose of this report, it is assumed that the disclosure statements are prepared at a level of accuracy acceptable for use in determining compliance with other antidiscrimination acts and regulations.

2.3.4 Data Not Disclosed Under the Act

The Act requires neither data on the demand for mortgage loans nor data on lending in non-SMSA geographical areas to be reported on disclosure statements. The absence of these two types of data impose limitations on the degree to which mortgage disclosure data can be used in determining compliance with antidiscrimination acts and regulations.

Absence of Demand Data: Although the Act and Regulation C require the disclosure of mortgage loan originations and purchases in each census tract in an SMSA, they do not require disclosure of the demand for loans in these same census tracts. Thus, a disclosure statement may show that few or no loans were originated for properties in a particular census tract; but, as discussed in Chapter 4, the full spectrum of issues related to demand for loans must be considered before compliance determinations can be made.

Absence of Data on Lending in Non-SMSA Areas: As discussed previously, not all depository institutions are subject to the reporting requirements of the Act. By far, the largest category of excluded institutions are those not located within an SMSA. A study conducted by the Federal Reserve System in 1976 indicates that assuming other criteria were kept constant, extension of reporting requirements to non-SMSA institutions would add an additional 6,800 institutions to the 8,700 already required to report under the Act.[17]

CHAPTER 3

A SUMMARY OF ANTIDISCRIMINATION ACTS AND REGULATIONS

This chapter presents a summary of the Fair Housing Act (Title VIII of the Civil Rights Act of 1968, referred to in this report as Title VIII), the Equal Credit Opportunity Act (ECOA) and the Community Reinvestment Act (CRA). A clear definition of the provisions of these three acts and their associated regulations is necessary before an assessment can be made of the use of mortgage loan disclosure data in determining the compliance of depository institutions with them. Following a brief summary of the legislative history and the interrelationships among the acts and regulations, the provisions of each relevant to mortgage lending, as well as this report, are summarized.

3.1 THE REGULATORY CONTEXT

In recent years, depository institutions have been the object of increased legislative and regulatory activity undertaken for the purpose of eliminating or deterring discrimination in housing and credit transactions. It is informative to examine briefly the history and the interrelationships among these acts and regulations before undertaking a detailed examination of the provisions of each. Four pieces of legislation are currently involved. They are: Title VIII, the Equal Credit Opportunity Act, the Home Mortgage Disclosure Act, and the Community Reinvestment Act. The regulations promulgated under the authority granted in this legislation are: HUD Regulation Part 110, FHLBB Regulation Parts 528, 531 & Regulation B (ECOA), Regulation C (HMDA) and the Community Reinvestment Act Regulations.

Figure 3.1 provides a chronology of the evolution of these acts and regulations.

3.2 THE FAIR HOUSING ACT (TITLE VIII)

Title VIII is directed against discrimination in housing. Its purpose is "...to provide, within constitutional limitations, for fair housing

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Fair Housing Act: (Title VIII of Civil Rights Act of 1968). Prohibited Discrimination in Housing Based on Race, Color, Religion, or National Origin.	→	→	→	→	→	Housing and Community Development Act of 1974. FHA amended as part of this legislation. Sex added as a prohibited basis	→	→	Housing and Community Development Act of 1977. Community Reinvestment Act: → (Title VIII of Housing and Community Development Act.)		→	→
Regulations promulgated pursuant to Title VIII:				FHLBB Regulation Part 528 adopted.	FHLBB Regulation Part 531.8 adopted.	FHLBB Regulation Part 528 Revised to include sex as a prohibited basis.				FHLBB Regulation Parts 528, 531.8 as amended. FDIC Regulation Part 338 adopted		
Consumer Credit Protection Act 5/29/68	→	→	→	→	→	→	Equal Credit → Opportunity Act passed. Prohibits discrimination in all credit transactions based on sex or marital status. Effective date for Act and regulations promulgated pursuant to Act 10/28/75.	ECOA amended → 3/23/76. Adds prohibitions on discrimination because of race, color, religion, national origin, receipt of income from public assistance, good faith exercise of rights under CCPA.	Regulation B amended to incorporate 1976 amendments (3/23/77).	→	→	→
							Home Mortgage → Disclosure Act passed 12/31/75. Title III of Public Law 94-200.	Effective → date: 6/28/76. Regulation C takes effect.	→	→	→	HMDA expires 6/28/80.

FIGURE 3.1: SUMMARY OF ANTIDISCRIMINATION LEGISLATION

throughout the United States." The Act made it unlawful to "...make unavailable or deny, a dwelling to any person because of race, color, religion, or national origin."

Title VIII states that "It shall be unlawful for any bank, building and loan association, ...firm or enterprise whose business consists in whole or in part in the making of commercial real estate loans, to deny a loan...or discriminate ...in the fixing of the amount....or other terms or conditions of such loan, because of the race, color, religion or national origin of such person, or of any person associated with him." Thus, Title VIII prohibits discrimination based on race, color, religion, sex* or national origin, in the financing of housing.

[illegible] THE EQUAL CREDIT OPPORTUNITY ACT ECOA

The purpose of ECOA is "to insure that the various financial institutions and other firms engaged in extensions of credit...make credit available with fairness, impartiality and without discrimination..." Like Title VIII therefore ECOA addresses the problem of discrimination. ECOA, however prohibits discrimination in all credit transactions by all firms "engaged in extension of credit."

Among other provisions ECOA makes it unlawful "for any creditor to discriminate against any applicant, with respect to any aspect of a credit transaction--

1. on the basis of race, color, religion, national origin, sex or marital status, or age (provided the applicant has the capacity to contract);
2. because all or part of the applicant's income derives from any public assistance program; or

*Sex was added as a prohibited basis in 1974.

3. because the applicant has in good faith exercised any right under the Consumer Credit Protection Act."

Thus, the Equal Credit Opportunity Act adds marital status, age, receipt of income from public assistance, and good faith exercise of rights granted under the Consumer Credit Protection Act as bases under which discrimination in the extension of credit is not permitted.

ECOA also requires that applicants for credit be notified of the outcome of an application within 30 days after the application is completed and be provided with a statement of reasons for an adverse action. In addition, the Act specifies the content of this notification.

3.4 REGULATIONS PROMULGATED PURSUANT TO TITLE VIII AND ECOA

Several sets of regulations have been promulgated by the regulatory agencies under the authority granted in Title VIII and the Equal Credit Opportunity Act Both FDIC Regulation Part 338, Fair Housing Regulation and FHLBB Regulation Parts 528 and 531.8, Non-Discrimination Requirements, Statements of Policy: Guidelines Relating to Non-Discrimination in Lending, draw primarily upon both Title VIII and the Equal Credit Opportunity Act for their authority and content. Regulation B, Equal Credit Opportunity, on the other hand, derives exclusively from the Equal Credit Opportunity Act and was promulgated by the Federal Reserve Board for each of the regulatory agencies.

3.4.1 FDIC Regulation Part 338, Fair Housing Regulations

Under the FDIC's Fair Housing Regulations, subject institutions are required to:

1. Display Fair Housing Lending Posters
2. Observe rules regarding nondiscrimination in advertising
3. Keep records on certain categories of loans.

The third of these requirements is relevant to this report, and thus, only the provisions related to this section will be discussed.

Like the Home Mortgage Disclosure Act, Part 338 makes a distinction between institutions in an SMSA with assets over $10 million and all others. Unlike HMDA, however, institutions in the latter category are not exempt from the requirements of the regulation. Rather, they are subject to less stringent recordkeeping requirements. Because only institutions in an SMSA with assets of over $10 million are subject to HMDA, only recordkeeping requirements in FDIC Part 338 pertinent to these institutions will be discussed.

Part 338 requires that data be maintained on home loan inquirers or applicants. An applicant is "a natural person...who makes an application." An application is "a written, or an oral in-person, request for a home loan by a natural person which is received on a bank's premises by any person at the bank who customarily receives or is authorized to receive such requests." Under this definition, telephone communications are not regarded as applications.

The following information on inquirers or applicants is to be requested and retained:

1. Name
2. Address
3. Race/national origin
4. Sex
5. Marital status
6. Age
7. Location of property.

In addition, the regulation requires that information on "Other Characteristics of Applicants," "Characteristics of Subject Property," and "Characteristics of Loan Request" be maintained. The data to be collected in these categories are displayed in Chart 3.3 at the end of this chapter. A final requirement is for institutions in an SMSA with assets over $10 million to maintain a log sheet on home loan inquiries and applications. Part 338 was promulgated under authority granted in Title VIII and ECOA, and its prohibited bases correspond to those listed in that legislation. These prohibited bases are set forth in the poster requirement of the regulation.

3.4.2 FHLBB Regulation Parts 528, 531.8, Non-Discrimination Requirements, Statements of Policy: Guidelines Relating to Non-Discrimination in Lending

The Fair Lending Regulations and Guidelines issued by the Federal Home Loan Bank Board apply to all savings and loan associations which are members of the Federal Home Loan Bank System and are similar to those issued by the FDIC. Like FDIC Part 338, the Federal Home Loan Bank Board's regulations require subject institutions to:

1. Display Fair Housing Lending Poster
2. Observe rules regarding nondiscrimination in advertising
3. Keep records on home loans.

An important difference, however, is found in the catalogue of prohibited bases of discrimination found in FHLBB Part 528. Section 528.2 of the Regulation "Nondiscrimination in Lending and Other Services," provides, in part, that:

> No member institution may deny a loan or other service, or discriminate in fixing the amount, interest rate, duration, application procedures, collection or enforcement procedures, or other terms or conditions of such loan or other service on the basis of the age or location of the dwelling, or on the basis of the race, color, religion, sex, or national origin of:
>
> (3) the present or prospective owners, lessees, tenants, or occupants of the dwelling(s) for which such loan or other service is to be made or given;
>
> (4) the present or prospective owners, lessees, tenants, or occupants of other dwellings in the vicinity of the dwelling(s) for which such loan or other service is to be made or given. (Emphasis ours)

Although these provisions establish important rights protecting those seeking various forms of credit, they add little to this report because of the overlapping nature of current regulations. The requirements of Regulation B concerning Information for Monitoring Purposes, for example, are met by the Recordkeeping Requirements of FDIC 338. Section 338.4 (d) Substitute System of the FDIC's regulation states that "A bank collecting data in compliance with Section 338.4 will be in compliance with the Recordkeeping Requirements of Section 202.13 of Regulation B. Similarly, the Bank Board's Regulation Part 528 incorporates by reference the prohibited bases added by ECOA to those already contained in Title VIII.

One important exception, mentioned earlier, concerns record retention. Section 528.6 (f) Recordkeeping of the Bank Board's Regulation states that, "...each member institution shall retain records as required by 12 CFR 202.12." The Bank Board's regulation, therefore, draws upon Regulation B in matters related to the procedures by which records are to be retained and preserved.

Thus, the requirements of Regulation B pertaining to mortgage credit and relevant to this report are automatically met by fulfilling the requirements of FDIC Part 338 and FHLBB Parts 528, 531.8. Consequently, subsequent analysis will focus on these latter two regulations and will not deal with Regulation B.

3.5 THE COMMUNITY REINVESTMENT ACT (CRA)

The Community Reinvestment Act is the most recent legislative effort in the areas of redlining and disinvestment. The Community Reinvestment Act mandates that the regulatory agencies encourage regulated financial institutions to serve the credit needs as well as the need for deposit services of the communities in which they are chartered to do business.

The Community Reinvestment Act requires "each appropriate Federal financial supervisory agency to use its authority when examining financial institutions, to encourage such institutions to help meet the credit needs of the local communities in which they are chartered consistent with the safe and sound operation of such institutions."

1. A description of how its current efforts...help to meet community credit needs;
2. A periodic report regarding its record of helping to meet community credit needs; and
3. A description of its efforts to ascertain the credit needs of its community including efforts to communicate with members of its community regarding credit services.

The central aspect of the CRA statement and one key to enforcement of e Act is the delineation, by each depository institution, of its local mmunity. As defined in the regulation, a local community "consists of the ntiguous areas surrounding each office or group of offices, including any w-and moderate-income neighborhoods in those areas." Under the regulation, depository institution may use any one of three bases in delineating its cal community:

1. Existing boundries such as those of Standard Metropolitan Statistical Areas (SMSAs) or counties in which the *institution's* office or offices are located....
2. ...effective lending territory, which is defined as that local area or areas around each office or group of offices where it makes a substantial portion of its loans and all other areas equidistant from its offices as those areas....
3. ...any other reasonably delineated local area that meets the purposes of the Community Reinvestment Act...and does not exclude low-and moderate-income neighborhoods."

In addition to preparing its CRA statement, each depository institution required to maintain a file of public comments and recent CRA statements. nally, the depository institutions are required under the regulations to form the public of the existence and availability of the CRA statement and le. This is done through a Community Reinvestment Act Notice posted in e public lobby of each of its offices, unless the statement itself is readily ailable, in which case a separate poster is not required.

The regulatory agencies discharge their responsibility for enforcing A by assessing the record of the depository institution in helping to meet that in San Diego, 37 percent of all mortgage loans were originated by institutions or individuals not subject to Federal or state reporting requirements.[16]

Thus, a disclosure statement shows the lending pattern of an individual depository institution, but it reveals nothing about the competition or supply of credit from other lenders (both those subject and not subject to the Act) for the loans made in a particular census tract.

2.3.3 Accuracy

The accuracy of mortgage disclosure statements imposes an obvious potential limitation on their use in determining compliance with antidiscrimination acts and regulations. To be at all useful the mortgage loan information in disclosure statements must accurately reflect the intended criteria for including and excluding certain types of loans and faithfully represent the true lending of the institution. Although Phase II, Accuracy of the HMDA study has identified inconsistencies in disclosure statements for the purpose of this report, it is assumed that the disclosure statements are prepared at a level of accuracy acceptable for use in determining compliance with other antidiscrimination acts and regulations.

2.3.4 Data Not Disclosed Under the Act

The Act requires neither data on the demand for mortgage loans nor data on lending in non-SMSA geographical areas to be reported on disclosure statements. The absence of these two types of data impose limitations on the degree to which mortgage disclosure data can be used in determining compliance with antidiscrimination acts and regulations.

Absence of Demand Data: Although the Act and Regulation C require the disclosure of mortgage loan originations and purchases in each census tract in an SMSA, they do not require disclosure of the demand for loans in these same census tracts. Thus a disclosure statement may show that few or no loans were originated for properties in a particular census tract; but, as discussed in Chapter 4, the full spectrum of issues related to demand for loans must be considered before compliance determinations can be made.

Absence of Data on Lending in Non-SMSA Areas: As discussed previously, not all depository institutions are subject to the reporting requirements of the Act. By far, the largest category of excluded institutions are those not located within an SMSA. A study conducted by the Federal Reserve System in 1976 indicates that assuming other criteria were kept constant, extension of reporting requirements to non-SMSA institutions would add an additional 6,800 institutions to the 8,700 already required to report under the Act.[17]

CHAPTER 3

A SUMMARY OF ANTIDISCRIMINATION ACTS AND REGULATIONS

This chapter presents a summary of the Fair Housing Act (Title VIII of the Civil Rights Act of 1968, referred to in this report as Title VIII), the Equal Credit Opportunity Act (ECOA), and the Community Reinvestment Act (CRA). A clear definition of the provisions of these three Acts and their associated regulations is necessary before an assessment can be made of the uses of mortgage loan disclosure data in determining the compliance of depository institutions with them. Following a brief summary of the legislative history and the interrelationships among the acts and regulations, the provisions of each relevant to mortgage lending, as well as this report, are summarized.

3.1 THE REGULATORY CONTEXT

In recent years, depository institutions have been the object of increasing legislative and regulatory activity undertaken for the purpose of attempting to deter discrimination in housing and credit transactions. It is informative to examine briefly the history and the interrelationships among these acts and regulations before undertaking a detailed examination of the provisions of each. Four pieces of legislation are centrally involved. They are: Title VIII, the Equal Credit Opportunity Act the Home Mortgage Disclosure Act, and the Community Reinvestment Act. The regulations promulgated under the authority granted in this legislation are: FDIC Regulation Part 338, FHLBB Regulation Parts 528, 531.8; Regulation B (ECOA); Regulation C (HMDA); and the Community Reinvestment Act Regulations.

Figure 3.1 provides a chronology of the evolution of these acts and regulations.

3.2 THE FAIR HOUSING ACT (TITLE VIII)

Title VIII is directed against discrimination in housing. Its purpose is "...to provide, within constitutional limitations, for fair housing

1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Fair Housing Act: (Title VIII of Civil Rights Act of 1968). Prohibited Discrimination in Housing Based on Race, Color, Religion, or National Origin.	→	→	→	→	→	Housing and Community Development Act of 1974. FHA amended as part of this legislation. Sex added as a prohibited basis	→	→	Housing and Community Development Act of 1977. Community Reinvestment Act: → (Title VIII of Housing and Community Development Act.)		→ →	→ →
Regulations promulgated pursuant to Title VIII:				FHLBB Regulation Part 528 adopted.	FHLBB Regulation Part 531.8 adopted.	FHLBB Regulation Part 528 Revised to include sex as a prohibited basis.				FHLBB Regulation Parts 528, 531.8 as amended. FDIC Regulation Part 338 adopted		
Consumer Credit Protection Act 5/29/68	→	→	→	→	→	→	Equal Credit → Opportunity Act passed. Prohibits discrimination in all credit transactions based on sex or marital status. Effective date for Act and regulations promulgated pursuant to Act 10/28/75.	ECOA amended → 3/23/76. Adds prohibitions on discrimination because of race, color, religion, national origin, receipt of income from public assistance, good faith exercise of rights under CCPA.	Regulation B amended to incorporate 1976 amendments (3/23/77).	→	→	→
							Home Mortgage → Disclosure Act passed 12/31/75. Title III of Public Law 94-200.	Effective → date: 6/28/76. Regulation C takes affect.	→	→	→	HMDA expires 6/28/80.

FIGURE 3.1: SUMMARY OF ANTIDISCRIMINATION LEGISLATION

throughout the United States." The Act made it unlawful to "...make unavailable or deny, a dwelling to any person because of race, color, religion, or national origin."*

Title VIII states that: "It shall be unlawful for any bank, building and loan association,...firm or enterprise whose business consists in whole or in part in the making of commercial real estate loans, to deny a loan...or discriminate. in the fixing of the amount,...or other terms or conditions of such loan. .because of the race, color, religion or national origin of such person, or of any person associated with him." Thus, Title VIII prohibits discrimination based on race, color, religion, sex or national origin, in the financing of housing.

3.3 THE EQUAL CREDIT OPPORTUNITY ACT (ECOA)

The purpose of ECOA is, "to insure that the various financial institutions and other firms engaged in extensions of credit...make credit available with fairness, impartiality, and without discrimination..." Like Title VIII therefore, ECOA addresses the problem of discrimination. ECOA, however, prohibits discrimination in all credit transactions by all firms "engaged in extension of credit."

Among other provisions, ECOA makes it unlawful "for any creditor to discriminate against any applicant, with respect to any aspect of a credit transaction--

1. on the basis of race, color, religion, national origin, sex or marital status, or age (provided the applicant has the capacity of contract);
2. because all or part of the applicant's income derives from any public assistance program; or

*Sex was added as a prohibited basis in 1974.

3. because the applicant has in good faith exercised any right under the Consumer Credit Protection Act."

Thus, the Equal Credit Opportunity Act adds marital status, age, receipt of income from public assistance, and good faith exercise of rights granted under the Consumer Credit Protection Act as bases under which discrimination in the extension of credit is not permitted.

ECOA also requires that applicants for credit be notified of the outcome of an application within 30 days after the application is completed and be provided with a statement of reasons for an adverse action. In addition, the Act specifies the content of this notification.

3.4 REGULATIONS PROMULGATED PURSUANT TO TITLE VIII AND ECOA

Several sets of regulations have been promulgated by the regulatory agencies under the authority granted in Title VIII and the Equal Credit Opportunity Act. Both FDIC Regulation Part 338 Fair Housing Regulation and FHLBB Regulation Parts 528 and 531.8, Non-Discrimination Requirements, Statements of Policy: Guidelines Relating to Non-Discrimination in Lending, draw primarily upon both Title VIII and the Equal Credit Opportunity Act for their authority and content. Regulation B, Equal Credit Opportunity, on the other hand, derives exclusively from the Equal Credit Opportunity Act and was promulgated by the Federal Reserve Board for each of the regulatory agencies.

3.4.1 FDIC Regulation Part 338, Fair Housing Regulations

Under the FDIC's Fair Housing Regulations, subject institutions are required to:

1. Display Fair Housing Lending Posters
2. Observe rules regarding nondiscrimination in advertising
3. Keep records on certain categories of loans.

The third of these requirements is relevant to this report, and thus, only the provisions related to this section will be discussed.

Like the Home Mortgage Disclosure Act, Part 338 makes a distinction between institutions in an SMSA with assets over $10 million and all others. Unlike HMDA, however, institutions in the latter category are not exempt from the requirements of the regulation. Rather, they are subject to less stringent recordkeeping requirements. Because only institutions in an SMSA with assets of over $10 million are subject to HMDA, only recordkeeping requirements in FDIC Part 338 pertinent to these institutions will be discussed.

Part 338 requires that data be maintained on home loan inquirers or applicants. An applicant is "a natural person...who makes an application." An application is "a written, or an oral in-person, request for a home loan by a natural person which is received on a bank's premises by any person at the bank who customarily receives or is authorized to receive such requests." Under this definition, telephone communications are not regarded as applications.

The following information on inquirers or applicants is to be requested and retained:

1. Name
2. Address
3. Race/national origin
4. Sex
5. Marital status
6. Age
7. Location of property.

In addition, the regulation requires that information on "Other Characteristics of Applicants," "Characteristics of Subject Property," and "Characteristics of Loan Request" be maintained. The data to be collected in these categories are displayed in Chart 3.3 at the end of this chapter. A final requirement is for institutions in an SMSA with assets over $10 million to maintain a log sheet on home loan inquiries and applications. Part 338 was promulgated under authority granted in Title VIII and ECOA, and its prohibited bases correspond to those listed in that legislation. These prohibited bases are set forth in the poster requirement of the regulation.

3.4.2 FHLBB Regulation Parts 528, 531.8, Non-Discrimination Requirements, Statements of Policy: Guidelines Relating to Non-Discrimination in Lending

The Fair Lending Regulations and Guidelines issued by the Federal Home Loan Bank Board apply to all savings and loan associations which are members of the Federal Home Loan Bank System and are similar to those issued by the FDIC. Like FDIC Part 338, the Federal Home Loan Bank Board's regulations require subject institutions to:

1. Display Fair Housing Lending Poster
2. Observe rules regarding nondiscrimination in advertising
3. Keep records on home loans.

An important difference, however, is found in the catalogue of prohibited bases of discrimination found in FHLBB Part 528. Section 528.2 of the Regulation "Nondiscrimination in Lending and Other Services," provides, in part, that:

> No member institution may deny a loan or other service, or discriminate in fixing the amount, interest rate, duration, application procedures, collection or enforcement procedures, or other terms or conditions of such loan or other service on the basis of the age or location of the dwelling, or on the basis of the race, color, religion, sex, or national origin of:
>
> (3) the present or prospective owners, lessees, tenants, or occupants of the dwelling(s) for which such loan or other service is to be made or given;
>
> (4) the present or prospective owners, lessees, tenants, or occupants of other dwellings in the vicinity of the dwelling(s) for which such loan or other service is to be made or given. (Emphasis ours)

Thus, in FHLBB Regulation 528, discrimination based upon the "age or location of the dwelling," is explicitly prohibited. In addition, the regulation makes it clearer than does the language in Title VIII that discrimination based on the race, etc., or those living in the neighborhood is prohibited.*

Under FHLBB Regulation 528, subject institutions are required to maintain records on home loan applicants. Under the Regulation, "Application means an oral or written request for an extension of credit that is made in accordance with procedures established by a creditor for the type of credit requested. ." According to this definition, a telephone communication or inquiry would not be an application unless an institution ordinarily accepted applications over the telephone.

The following information is to be requested of all loan applicants:

1. Race/national origin,...;
2. Sex;
3. Marital status,...; and
4. age.

In addition, subject institutions are required to "maintain a current, readily accessible loan register." These records are to be retained for 25 months after the creditor has notified the applicant of the action taken on the application. This provision is drawn from Section 202.12 of Regulation B.

3.4.3 Regulation B, Equal Credit Opportunity

Regulation B, promulgated pursuant to the Equal Credit Opportunity Act, implements the general rule that "A creditor shall not discriminate against an applicant on a prohibited basis regarding any aspect of a credit transaction." Provisions of the regulation cover Applications, Evaluation of Applications, Extensions of Credit, Notifications, Recordkeeping, and other areas related to the Act.

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*Courts have interpreted the language of Title VIII and thus FDIC Part 338 as having the same broad reach as that in FHLBB Part 528.2(4).

Although these provisions establish important rights protecting those seeking various forms of credit, they add little to this report because of the overlapping nature of current regulations. The requirements of Regulation B concerning Information for Monitoring Purposes, for example, are met by the Recordkeeping Requirements of FDIC 338 Section 338.4 (d) Substitute System of the FDIC's regulation states that, "A bank collecting data in compliance with Section 338.4 will be in compliance with the Recordkeeping Requirements of Section 202.13 of Regulation B. Similarly, the Bank Board's Regulation Part 528 incorporates by reference the prohibited bases added by ECOA to those already contained in Title VIII.

One important exception, mentioned earlier, concerns record retention. Section 528.6 f) Recordkeeping of the Bank Board's Regulation states that, "...each member institution shall retain records as required by 12 CFR 202.12." The Bank Board's regulation, therefore draws upon Regulation B in matters related to the procedures by which records are to be retained and preserved.

Thus, the requirements of Regulation B pertaining to mortgage credit and relevant to this report are automatically met by fulfilling the requirements of FDIC Part 338 and FHLBB Parts 528, 531.8. Consequently, subsequent analysis will focus on those latter two regulations and will not deal with Regulation B.

3.5 THE COMMUNITY REINVESTMENT ACT (CRA)

The Community Reinvestment Act is the most recent legislative effort in the areas of redlining and disinvestment. The Community Reinvestment Act mandates that the regulatory agencies encourage regulated financial institutions to serve the credit needs as well as the need for deposit services of the communities in which they are chartered to do business.

The Community Reinvestment Act requires "each appropriate Federal financial supervisory agency to use its authority when examining financial institutions, to encourage such institutions to help meet the credit needs of the local communities in which they are chartered consistent with the safe and sound operation of such institutions."

Thus, the Act both recognizes the legitimacy and importance of credit needs and assigns the regulatory agencies the responsibility for seeing that these needs are met.

3.6 COMMUNITY REINVESTMENT ACT REGULATIONS

The purposes of the regulations implementing CRA are "to encourage *regulated depository institutions* to help meet the credit needs of their local community or communities; to provide guidance to *institutions* on how the *regulatory agencies* will assess *their* records in satisfying their continuing and affirmative obligation to help meet the credit needs of their local communities...and to provide for taking into account those records in connection with certain applications."

Central to implementation of CRA by the depository institutions is the preparation by each of a CRA statement. This document is to be prepared by the Board of Directors of each subject institution and reviewed annually. The purpose of the CRA statement is threefold: to ensure that each institution's Board of Directors consider the purpose of CRA and what their institution's response will be, to inform the community of the types of credit that the institution offers, and to aid the agencies' examiners in assessing each institution's record.

To ensure that the CRA statement accomplishes those ends, the regulation requires that it include at least the following:

1. The delineation of the local community;
2. A list of specific types of credit within certain categories... that the *depository institution* is prepared to extend within the local community; and
3. A copy of the Community Reinvestment Act Notice.

In addition, each depository institution is encouraged to include the following in each CRA statement:

1. A description of how its current efforts...help to meet community credit needs;
2. A periodic report regarding its record of helping to meet community credit needs; and
3. A description of its efforts to ascertain the credit needs of its community including efforts to communicate with members of its community regarding credit services.

The central aspect of the CRA statement and one key to enforcement of the Act is the delineation, by each depository institution, of its local community. As defined in the regulation, a local community "consists of the contiguous areas surrounding each office or group of offices, including any low-and moderate-income neighborhoods in those areas." Under the regulation, a depository institution may use any one of three bases in delineating its local community:

1. Existing boundries such as those of Standard Metropolitan Statistical Areas (SMSAs) or counties in which the *institution's* office or offices are located....
2. ...effective lending territory, which is defined as that local area or areas around each office or group of offices where it makes a substantial portion of its loans and all other areas equidistant from its offices as those areas....
3. ...any other reasonably delineated local area that meets the purposes of the Community Reinvestment Act...and does not exclude low-and moderate-income neighborhoods."

In addition to preparing its CRA statement, each depository institution is required to maintain a file of public comments and recent CRA statements. Finally, the depository institutions are required under the regulations to inform the public of the existence and availability of the CRA statement and file. This is done through a Community Reinvestment Act Notice posted in the public lobby of each of its offices, unless the statement itself is readily available, in which case a separate poster is not required.

The regulatory agencies discharge their responsibility for enforcing CRA by assessing the record of the depository institution in helping to meet the credit needs of its entire community. The CRA regulation lists twelve factors the agencies are to use in assessing the record of performance. Notable among these for the purposes of this report are two assessment factors which deal with the institutions record of meeting the credit needs of its local community as opposed to those in other areas:

e) the geographic distribution of the depository institution's credit extensions, credit applications, and credit denials

i) the depository institution's origination of residential mortgage loans, housing rehabilitation loans, home improvement loans, and small business or small farm loans within its community, or the purchase of such loans originated in its community.

The regulatory agencies are to determine, according to these and other criteria, if depository institutions are meeting the credit needs of their local communities in particular, housing related credit needs of low and moderate income neighborhood residents. Under the regulation, this record is to be taken into account in connection with the regulatory agencies' consideration of various types of applications.

SUMMARY

Together, Title VIII, the Equal Credit Opportunity Act, and the Community Reinvestment Act require that regulatory agencies ensure that subject depository institutions are not discriminating in the origination of mortgage loans based on 14 compliance requirements. These requirements and their corresponding legislation are shown in Chart 3.2. To accomplish this mission, the regulatory agencies and their examiners have but one investigative tool at their disposal — data on an institution's lending behavior. As discussed in this Chapter, the regulations promulgated pursuant to the antidiscrimination legislation require banks to maintain information on numerous aspects of loan transactions. This information is shown on Chart 3.3. In the next chapter of this report, the use of home mortgage disclosure data to evaluate compliance with other acts and regulations will be discussed. This will involve a careful examination

COMPLIANCE	Title VIII, FHLBB pts 528,531.8, FDIC Pt 338	ECOA, Reg. B, FHLBB Pts 528,531.8, FDIC Pt 338	FHLBB Pts 528,531.8	CRA
Race	X	X	X	
Color	X	X	X	
Religion	X	X	X	
National Origin	X	X	X	
Sex	X	X	X	
Age of Dewlling			X	
Location of Dewlling			X	
Mariatl Status		X		
Age of Individual		X		
Because All or Part of Applicants' Income from Public Assistance		X		
Exercise of Right Under Consumer Credit Protection Act		X		
Serve Credit Needs of Local Commities				X
- Special Consideration: Low- and Moderate-Income Neighborhoods				X
- Assessment Factors: (e) Geographic Distribution of Credit Extension				X
(i) Origination and Purchase of Residential Mortgage Loans				X

CHART 3.2: COMPLIANCE REQUIREMENTS CONTAINED IN ANTIDISCRIMINATION ACTS OF REGULATIONS

INFORMATION TO BE MAINTAINED	FDIC 338	FHLBB 528	ECOA REG.B	HMDA REG.C	CRA
On Inquirer or Applicant					
Name	X	X	X		
Address	X	X	X		
Race/National Origin	X	X	X		
Sex	X	X	X		
Marital Status	X	X	X		
Age of Inquirer/Applicant	X	X	X		
Location of Property Purchased	X				
Employment	X				
Income	X				
Number of Dependents	X				
Total Assets	X				
Total Liabilities	X				
Total Monthly Payments on Liabilities	X				
Customers of Bank	X				
Characteristics of Subject Property					
Year Built	X	X			
Purchase Price or Approximate Current Market Value	X				
Value of Land	X				
Street Address, City, County, State, Zip	X				
Census Tract	X	X			
Number of Residential Units					
Characteristics of Loan Request					
Purpose	X				
Type	X				
Amount	X	X			
Interest Rate	X	X			
Months to Maturity	X	X			
Monthly Payment	X				
Estimated Total Closing Costs	X	X			
Estimated Closing Costs Paid by Seller	X				
Estimated Real Estate Taxes and Insurance	X				
Loan to Value Ratio		X			
Geographical Distribution of Mortgage Loans by Census Tract				X	
Deliniation of "Local Community"					X
List of Specific Types of Credit Within Certain Categories Bank is Prepared to Make					X
File of Signed, Written Comments Received from the Public Within the Past Two Years Relating to CRA Statement or Banks Performance of Meeting Credit Needs					X
CRA Statement					X

CHART 3.3: RECORDS MAINTAINED UNDER TITLE VIII, ECOA, HMDA, CRA
(For Institutions in an SMSA with Assets Over 10 Million)

of the convergence of home mortgage disclosure and other available data and their use in uncovering individual discrimination or patterns of discrimination violating the prohibited bases.

CHAPTER 4

USE OF MORTGAGE DISCLOSURE DATA IN COMPLIANCE DETERMINATIONS

This chapter presents the results of an analysis performed to establish the extent to which mortgage disclosure data are useful in determining the compliance of depository institutions with the requirements of the Fair Housing Act (Title VIII), the Equal Credit Opportunity Act (ECOA), the Community Reinvestment Act (CRA), and their implementing regulations. An analysis of potential uses shows that home mortgage disclosure data used alone do not provide a sufficient basis for determining whether depository institutions are complying with these acts and regulations. Rather, the analysis shows that the use of mortgage disclosure data is restricted to the role of an "alerting mechanism" of use in detecting differential patterns of lending among census tracts which may indicate the need for further investigation to determine if an institution has violated certain of the compliance requirements. The analysis of potential uses indicates that other types of information must be obtained and analyzed before a definitive finding of discrimination can be made. These include demographic information, data on the "demand" for mortgage loans, and information on the affirmative steps taken by a depository institution to seek loans. Thus, the limited role mortgage disclosure data can play as an alerting mechanism should be seen in the broader context of the supplementary data and investigations needed before a determination of compliance or noncompliance with the antidiscrimination laws and regulations can be made or noncompliance determined.

Following the analysis of potential uses, a discussion of the extent to which mortgage disclosure data are currently being used by the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation in compliance examinations and investigations is presented. The findings of a brief survey show the mortgage disclosure data are currently used as an integral part of compliance examinations and investigations. Finally, the use of mortgage disclosure data by the public and by depository institutions is discussed. This discussion emphasizes the limitations in use imposed on these users by the lack of available data on the demand for loans, current demographic information, and characteristics of individual applicants and borrowers.

4.1 THE ANALYSIS OF POTENTIAL USES

Figure 4.1 shows, in diagrammatic form, the use of mortgage disclosure data to estimate compliance with relevant acts and regulations. A detailed discussion of the steps shown in the chart will form the basis of the analysis of the potential uses of home mortgage disclosure data. This presentation will be in two parts. The first part, discussing the left-hand side of the figure, will analyze the use of home mortgage disclosure data as an alerting mechanism. The second section, dealing with the right-hand side, treats the additional information and analysis required before a definitive assessment of compliance with relevant prohibited bases can be made.

4.1.1 The Requirements

The purpose of the Home Mortgage Disclosure Act is, in part, "...to provide ...citizens and public officials...with sufficient information to enable them to determine whether depository institutions are filling their obligations to serve the housing needs of the communities and neighborhoods in which they are located...." The Act requires subject depository institutions to prepare a disclosure statement reporting, by census tract, their lending in each SMSA in which they have an office.

The home mortgage disclosure data generated under the Act is potentially useful in detecting two types of lending practions that have come under legislative scrutiny: discrimination and redlining. Many definitions for these two terms exist. For the purposes of this analysis, discrimination is defined as an unlawful real estate financing decision which has the purpose or effect of disadvantaging a borrower or prospective borrower on the basis of his or her personal characteristics, or the age of the dwelling for which financing is sought. Redlining is defined as an unlawful real estate financing decision which has the purpose or effect of disadvantaging a borrower or prospective borrower based on the geographic location of the property.

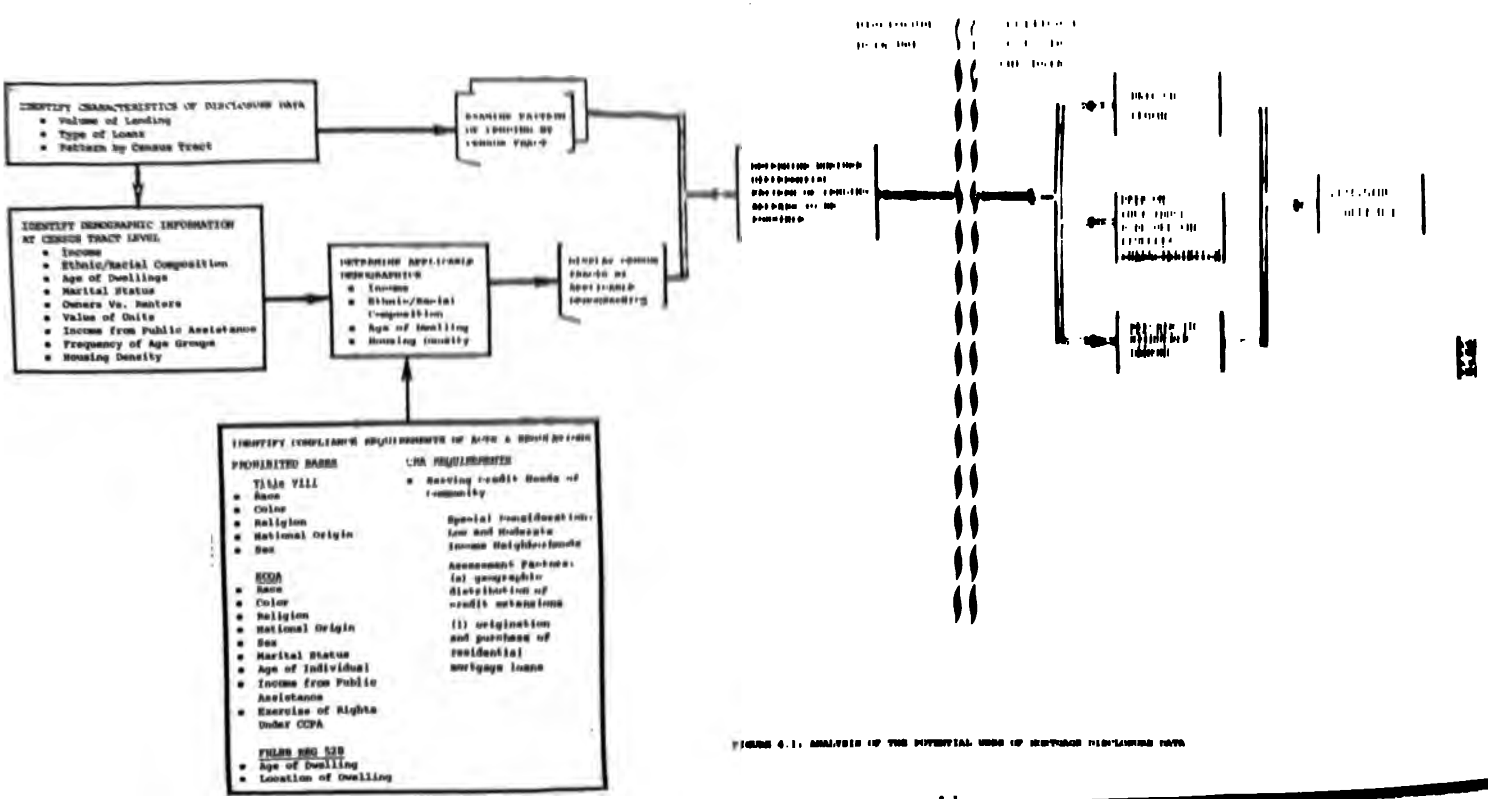
IDENTIFY CHARACTERISTICS OF DISCLOSURE DATA
• Volume of Lending
• Type of Loans
• Pattern by Census Tract
IDENTIFY DEMOGRAPHIC INFORMATION AT CENSUS TRACT LEVEL
• Income
• Ethnic/Racial Composition
• Age of Dwellings
• Marital Status
• Owners Vs. Renters
• Value of Units
• Income from Public Assistance
• Frequency of Age Groups
• Housing Density
EXAMINE PATTERN OF LENDING BY CENSUS TRACT
DETERMINE APPLICANT DEMOGRAPHICS
• Income
• Ethnic/Racial Composition
• Age of Dwelling
• Housing Density
DISPLAY CENSUS TRACTS BY APPLICANT DEMOGRAPHICS
IDENTIFY COMPLIANCE REQUIREMENTS OF ACTS & REGULATIONS
PROHIBITED BASES
Title VIII
• Race
• Color
• Religion
• National Origin
• Sex
ECOA
• Race
• Color
• Religion
• National Origin
• Sex
• Marital Status
• Age of Individual
• Income from Public Assistance
• Exercise of Rights Under CCPA
FHLBB REG 528
• Age of Dwelling
• Location of Dwelling
CRA REQUIREMENTS
• Serving Credit Needs of Community
Special Consideration: Low and Moderate Income Neighborhoods
Assessment Factors: (a) geographic distribution of credit extensions
(1) origination and purchase of residential mortgage loans

FIGURE 4.1: ANALYSIS OF THE POTENTIAL USES OF MORTGAGE DISCLOSURE DATA

As discussed in Chapter 3, Title VIII and ECOA together with FHLBB Regulation 528 establish 11 prohibited bases aimed at various forms for discrimination and redlining. In this chapter, CRA assessment factors (e) and (i), and the special consideration given low- and moderate-income neighborhoods in the Act, are combined with these 11 prohibited bases to form 14 "compliance requirements." These serve as the basis for the analysis of potential uses. Although home mortgage disclosure data are not useful in assessing compliance with all these requirements, it is worthwhile to restate these before proceeding to the details of the analysis of potential uses.

The Fair Housing Act prohibits discrimination based upon:

- Race
- Color
- Religion
- National origin
- Sex

The Equal Credit Opportunity Act also prohibits discrimination predicated on these grounds, and adds four additional prohibited bases. It prohibits discrimination based upon:

- Marital status
- Age of the individual (Providing he/she has the capacity to contract)
- The fact that all or part of applicant's income derives from public assistance
- A good faith exercise of a right under the Consumer Credit Protection Act.

Federal Home Loan Bank Board Regulations Part 528, Non-Discrimination Requirements, Part 531.8, Statement of Policy: Guidelines Relating to Non-Discrimination in Lending add age and dwelling as an explicitly stated prohibited basis. In addition, the regulation states the prohibition on discrimination based upon location of dwelling more explicitly than does other legislation. The location of dwelling is a highly significant prohibited

[illegible]

[illegible]

[illegible]

- [illegible]

- [illegible]

[illegible]

[illegible]

[illegible]

lending by a depository institution as reflected in information on mortgage loan originations and purchases aggregated at the census tract level.

The relationship between the compliance requirements and the disclosure data aggregated at the census tract level can be defined by a two-stage process. These two stages are shown in Figure 4.2. The initial stage separates those compliance requirements that are, by nature geographically defined, from those that are not. Three compliance requirements are geographically defined:

- Location of dwelling (Regulation 528)
- CRA assessment factor (e) which requires examination of the geographic distribution of the institution's credit extensions
- CRA assessment factor (i) which requires examination of the institution's origination and purchase of mortgage loans, housing rehabilitation loans, and home improvement loans in its community.

The mortgage disclosure data have a direct relationship with those three compliance requirements because disclosure statements display loans secured by properties located in geographic areas defined by census tract boundaries.

Mortgage disclosure data can be related to all other compliance requirements only through use of demographic information that define the composition of a given census tract in terms of the compliance requirement. Race, sex, age of dwelling, are prohibited bases that can be related to lending information aggregated by census tracts only if demographic information giving the pattern of those variables are available for the census tracts of interest.

The second stage of the process addresses the question of whether the demographic information, when aggregated at the census tract level for each compliance requirement, provide a meaningful basis for comparing mortgage lending among the various census tracts. For some compliance requirements, the demographic information does provide a meaningful basis for comparing lending patterns

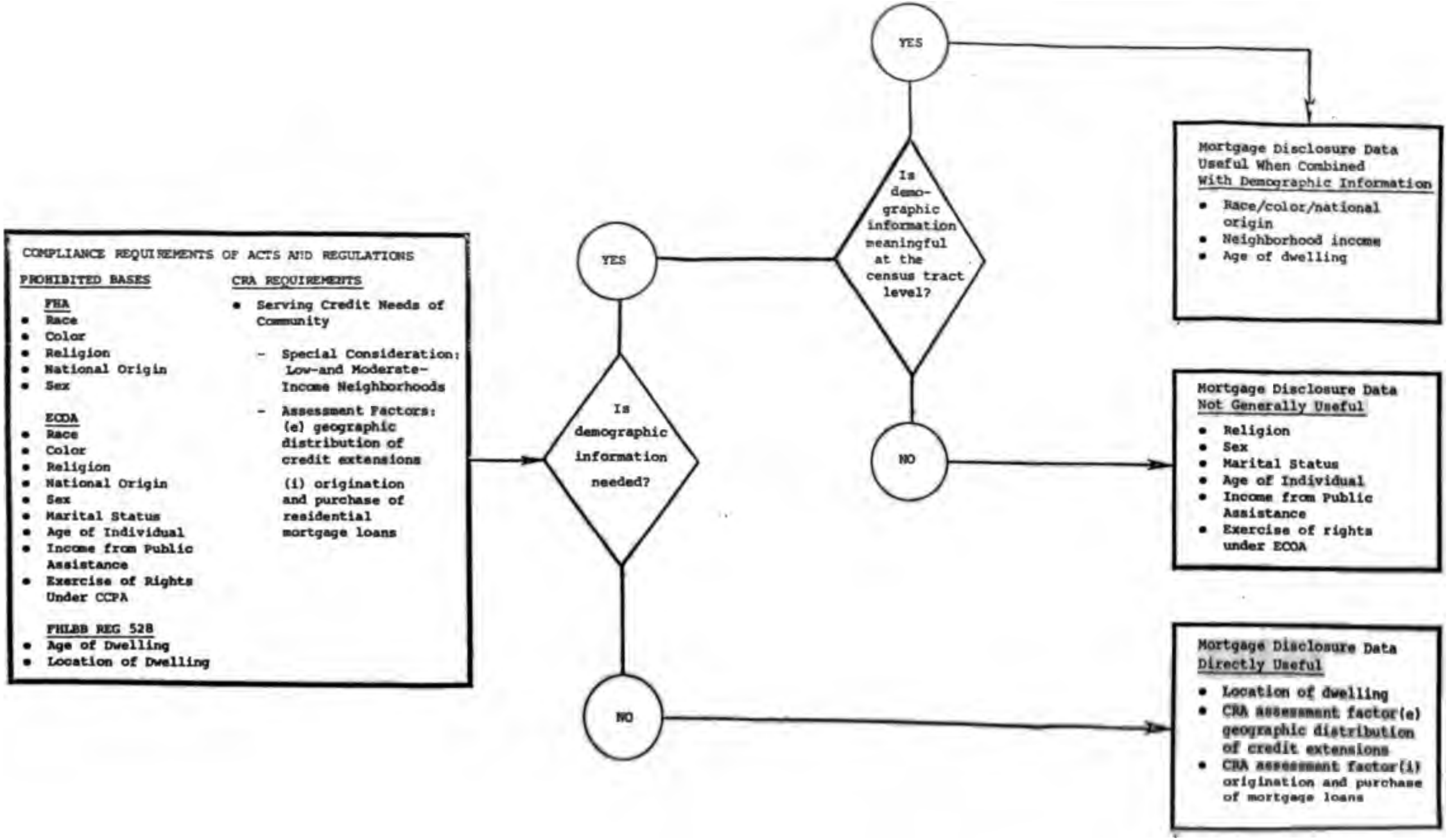
COMPLIANCE REQUIREMENTS OF ACTS AND REGULATIONS
PROHIBITED BASES
FHA
• Race
• Color
• Religion
• National Origin
• Sex
ECOA
• Race
• Color
• Religion
• National Origin
• Sex
• Marital Status
• Age of Individual
• Income from Public Assistance
• Exercise of Rights Under CCPA
FHLBB REG 528
• Age of Dwelling
• Location of Dwelling
CRA REQUIREMENTS
• Serving Credit Needs of Community
- Special Consideration: Low-and Moderate-Income Neighborhoods
- Assessment Factors: (e) geographic distribution of credit extensions
(i) origination and purchase of residential mortgage loans
Is demographic information needed?
YES
NO
Is demographic information meaningful at the census tract level?
YES
NO
Mortgage Disclosure Data Useful When Combined With Demographic Information
• Race/color/national origin
• Neighborhood income
• Age of dwelling
Mortgage Disclosure Data Not Generally Useful
• Religion
• Sex
• Marital Status
• Age of Individual
• Income from Public Assistance
• Exercise of rights under ECOA
Mortgage Disclosure Data Directly Useful
• Location of dwelling
• CRA assessment factor(e) geographic distribution of credit extensions
• CRA assessment factor(i) origination and purchase of mortgage loans

FIGURE 4.2: TWO-STAGE PROCESS TO DETERMINE POTENTIAL USEFULNESS OF MORTGAGE DISCLOSURE DATA

at the census tract level. Other compliance requirements, however, address variables that provide a much less significant basis of comparison with the demographic information. This is because these variables do not occur in patterns that are geographically arrayed. Those compliance requirements with associated demographics that clearly provide a meaningful basis for comparison include: race, color, national origin neighborhood, income, and age of dwelling. Those providing a less meaningful basis for comparison include: sex religion, marital status, age of individual, income from public assistance, and good faith exercise of rights granted under the Consumer Credit Protection Act. In certain cases, demographic information associated with the latter group of compliance requirements might be meaningful when aggregated at the census tract level. Such cases would, however, be rare. Information on individual applicants and borrowers are generally needed to assess lending patterns on the basis of these compliance requirements.

As shown in Figure 4.2, therefore, a two-stage process separates the compliance requirements into three categories defined by the potential usefulness of mortgage disclosure data in determining depository institution compliance with the requirement. Within each of those three categories, mortgage disclosure data are:

- Directly useful because the requirement is geographically defined
- Generally useful when combined with demographic information
- Generally not useful because the demographic information is not meaningful at the census tract level.

The term "potential usefulness" is stressed above for several reasons. First, as discussed in detail later, mortgage disclosure data used alone do not provide a sufficient basis for determining whether depository institutions are meeting compliance requirements. Second, obtaining the current demographic information is often a problem, and the relevance of mortgage disclosure data to certain compliance requirements (see Figure 4.2) is critically dependent upon the availability of this information. Third because population and housing characteristics are generally not homogeneous throughout a census tract, information on aggregate lending in a census tract cannot be used under the assumption that all people, areas, or houses within the tract were given similar consideration. Although the disclosure data do give insight into the lending pattern for a census tract, they reveal nothing about the fate of individual applications which may vary greatly. Fourth, discrimination can occur, not only in the granting or refusal of a loan, but also in the terms and conditions offered. Mortgage disclosure data cannot reveal instances of the latter form of discrimination. Finally, the mortgage disclosure data show nothing about the individual characteristics of loan applicants or prospective applicants.

These limitations form the basis for the central question informing this study: do mortgage disclosure data have any significant use in determining compliance with antidiscrimination acts and regulations? The next section answers this question by showing how these data can be used as an alerting mechanism.

4.1.3 An Alerting Mechanism

By showing the aggregate volume of mortgage lending for properties within each census tract, mortgage disclosure data provide a means for alerting users to differential lending patterns at the census tract level. Although census tract areas do not represent actual neighborhoods with homogeneous population and housing characteristics, they are generally relatively small geographic areas containing approximately 4,000 people. Mortgage disclosure statements are currently the only source of data which aggregate and display mortgage lending information on a geographic basis.

Mortgage disclosure data are directly relevant to the three geographically defined compliance requirements described in the previous section. For other compliance requirements, however, disclosure data must be combined with demographic information to establish a relationship that renders them useful. The direct relationship between mortgage disclosure data and the three geographically defined compliance requirements will be examined in the following paragraphs.

Applicability of Mortgage Disclosure Data to Geographically Defined Compliance Requirements: The applicability of mortgage disclosure data to CRA assessment factor (e) "the geographic distribution of...credit extensions, credit applications and credit denials, is obvious Mortgage disclosure data, to be sure, address only the credit extension portion of this assessment factor, and these data only for housing related credit. Still mortgage disclosure data address this assessment factor directly by providing data displaying the geographic distribution of credit extensions for originations and purchases of mortgage loans and home improvement loans.

The applicability of mortgage disclosure data to CRA assessment factor (i), "the origination of residential mortgage loans, housing rehabilitation loans, home improvement loans, and small business or small farm loans within its community, or the purchase of such loans. ," is also clear. The degree of applicability, however, depends upon the particular way the assessment factor is employed and the manner in which depository institutions define their local communities. This factor overlaps with assessment factor (e) in that both relate to patterns of credit extensions.

To the extent that census tracts are a suitable basis for defining dwelling location, mortgage disclosure data are applicable for assessing lending in terms of the location of dwelling, a prohibited basis under FHLBB Regulation 528. As discussed earlier, however population and housing characteristics are not necessarily homogeneous throughout a census tract. Consequently the display of data by census tracts can mask out certain locations of interest.

One fact is certain about the assessment of these three compliance requirements: a means of displaying mortgage loan information on geographical basis is indispensible Mortgage disclosure data offer the only currently available means for obtaining already aggregated data on a census tract basis for properties within SMSAs Furthermore, census tracts appear to be the most practical geographic basis for displaying patterns of mortgage lending within SMSAs. Although displaying mortgage lending patterns on the basis of actual neighborhoods would be more useful, this approach is impractical because of the difficulties associated with neighborhood definitions, geocoding tools, and obtaining updated demographic information. Thus, mortgage disclosure data, with all their limitations, provide essential data currently not available elsewhere in a form appropriate for assessing these three factors.

Applicability of Mortgage Disclosure Data to Other Compliance Requirements: The applicability of mortgage disclosure data to the other compliance requirements depends upon demographic information. The compliance requirements of race, color, national origin, neighborhood income, and age of dwelling provide the best opportunity for use of some mortgage disclosure data because the demographic information associated with these compliance requirements can generally be expressed meaningfully at the census tract level. Census tracts with substantial minority populations, low or moderate incomes, and older houses can be identified with proper demographic information. Although demographic information is available for other compliance requirements (e.g., sex and marital status), these are generally less meaningful when aggregated at the census tract level.

Thus, in cases where demographic information can be used to isolate census tracts characterized by significant percentages of minority residents or low-income residents, and or older houses, mortgage disclosure data can be used as an alerting mechanism to detect the possibility of discrimination on the basis of one or more of the compliance requirements.

Using Mortgage Disclosure Data as an Alerting Mechanism: The manner in which mortgage disclosure data can be used as an alerting mechanism can best be illustrated by a hypothetical example analyzing the lending patterns of three institutions. In the example, it is assumed that six census tracts define the local community of each institution. The lending pattern of the three institutions, labeled "A," "B," and "C" are shown in Figure 4.3, along with the demographic information for the six census tracts. Demographic data relating to only three compliance requirements are considered in the example. These are: race, age of housing stock, and income. Census tracts number 2 and 3 have 73 percent and 97 percent minority populations, respectively.

INSTITUTION A

Census Tract #1 Lending #/$: 1/30,000 Race: 10% Age: 12 Income: 27K	Census Tract #4 Lending #/$: 2/60,000 Race: 17% Age: 10 Income: 19K
Census Tract #2 Lending #/$: 3/60,000 Race: 73% Age: 30 Income: 5K	Census Tract #5 Lending #/$: 16/560,000 Race: 5% Age: 3 Income: 25K
Census Tract #3 Lending #/$: 6/120,000 Race: 97% Age: 45 Income: 4K	Census Tract #6 Lending #/$: 1/40,000 Race: 3% Age: 7 Income: 35K

INSTITUTION B

Census Tract #1 Lending #/$: 7/210,000 Race: 10% Age: 12 Income: 17K	Census Tract #4 Lending #/$: 9/360,000 Race: 17% Age: 10 Income: 19K
Census Tract #2 Lending #/$: 0/0 Race: 73% Age: 30 Income: 5K	Census Tract #5 Lending #/$: 17/595,000 Race: 5% Age: 3 Income: 25K
Census Tract #3 Lending #/$: 1/20,000 Race: 97% Age: 45 Income: 4K	Census Tract #6 Lending #/$: 20/800,000 Race: 3% Age: 7 Income: 35K

INSTITUTION C

Census Tract #1 Lending #/$: 2/60,000 Race: 10% Age: 12 Income: 17K	Census Tract #4 Lending #/$: 1/30,000 Race: 17% Age: 10 Income: 19K
Census Tract #2 Lending #/$: 6/120,000 Race: 73% Age: 30 Income: 5K	Census Tract #5 Lending #/$: 17/595,000 Race: 5% Age: 3 Income: 25K
Census Tract #3 Lending #/$: 1/20,000 Race: 97% Age: 45 Income: 4K	Census Tract #6 Lending #/$: 23/920,000 Race: 3% Age: 7 Income: 35K

LEGEND: Lending #/$ = Lending in census tract in terms of number of loans and dollar value
Race = Percent minority population
Age = Average age of housing stock
Income = Median income for family

FIGURE 4.3: HYPOTHETICAL EXAMPLE OF LENDING BY THREE INSTITUTIONS

In addition, these two tracts are characterized by older houses and low median family incomes. The other four census tracts have low percentages of minority residents, newer houses, and high median family incomes. The number and the amount of loans originated by the three institutions in each census tract is shown in the figure. These data, as well as information on the type of loan (e.g., FHA, Conventional) can be obtained from mortgage disclosure statements. The use of these data combined with the demographic information illustrate both the role of the alerting mechanism as well its limitations. The following observations can be made by examining the lending patterns of each the three institutions.

Institution A: An examination of the lending pattern of Institution A reveals no apparent pattern of discrimination on the basis of race or age of housing stock. Furthermore, the lending pattern indicates that the institution appears to be meeting the credit needs of the low-and moderate-income areas of its local community. These two observations are based on the following findings:

- Census tracts 2 and 3 with by far the lowest income, highest percentage of minority residents, and the oldest housing stock received more loans in number and dollar value than 1 and 6, the two highest income areas.
- Overall, no observable correlation between lending and any of the three compliance requirements appears to exist.

Thus, for Institution A, the use of home mortgage disclosure data would not alert one to the possibility of discrimination on any of the three complianc requirements. Rather, they provide the appearance that lending was performed without regard to any of the three requirements. To be sure, other information, such as written complaints might exist, contradicting this conclusion and suggesting the need for further investigation. If so, further investigation would be warranted in spite of the absence of an alert from the use of mortgage disclosure data.

Institution B: Examination of the lending patterns of Institution B offers a significant contrast to those from Institution A. Here, home mortgage disclosure data alert the user to the possibility of redlining or discriminatory lending practices. This observation is based upon the following findings:

- Census tracts 2 and 3 combined, received only one loan valued at $25,000 while each of the others received between 7 and 20 loans valued at between $210,000 and $800,000.
- The patterns of low lending correspond precisely to the racial composition, age of housing stock, and income levels of the three areas Those areas with few minorities, new housing stock, and high income received many loans, whereas, those areas with contrary characteristics received few loans.

Although home mortgage disclosure data do alert one to possible redlining or discriminatory practices for Institution B, it is important to note that they prove nothing conclusive about the existence of either. Indeed, it is impossible to determine from the results of the comparison which factor or factors explain the differential lending patterns. Nothing in the data, for example, obviates the possibility that the low lending in census tracts 2 and 3 may be explained by the fact that no one applied for loans in those areas, despite adequate efforts by Institution B to seek loans. Furthermore, given the fact that Institutions A and B serve tbe same area, it is possible that Institution A or another institution or private lender may have made all of the sound loans in the census tracts.

Institution C: An examination of the lending pattern of Institution C reveals an ambiguous situation. The pattern of lending when viewed against the demographic characteristics of the census tracts, provides neither a strong alert to possible discriminatory lending practices nor strong evidence to the contrary. This observation is based upon the following findings:

- Census tracts 2 and 3, which have high minority populations, old houses, and low income received six loans and one loan, respectively.
- The volume of lending in census tracts 2 and 3 was much lower than in census tracts 5 and 6 but was equivalent or greater than the lending in census tracts 1 and 4.

- [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

is obviously much different than that needed to determine whether redlining or discrimination occurred on the basis of the terms offered. Mortgage disclosure data, used in the manner described above, can alert the user to a differential pattern in the granting of loans, but reveals nothing about the terms of the loans.

Isolated Instances of Discrimination: An institution whose lending practices are generally nondiscriminatory could in isolated instances, deny loans to a few applicants whose borrowing and prospective property characteristics appear to be similar to those receiving loans Mortgage disclosure data provide insight only into geographic patterns of redlining or discrimination and thus would not be helpful in uncovering such isolated examples. Detection of such isolated instances would have to be by other means such as consumer complaints or a review of denied applications.

Redlining and Patterns of Discrimination: As discussed in the previous section, mortgage disclosure data can alert the user to the presence of a differential pattern of lending, but these data used alone prove nothing conclusive about either redlining or discrimination. Establishing the presence of redlining or discrimination requires informed judgments on the loan granting policies and procedures of the institution and on the institution's effort to serve the credit needs of its community. Although many types of data and analysis might be employed to aid in these determinations, detection of redlining discrimination depends, in the last analysis on the informed judgment of those responsible for enforcement of the antidiscrimination acts and regulations. The reason is that no prescribed set of procedures will automatically lead to a totally certain determination of redlining or discrimination. One thing is certain, however. Data on the demand for loans is required before determination can be made that either redlining or discrimination has occurred.

Demand for Loans: The issues surrounding both the definition and use of demand data are complex. Indeed, the term "demand data" means many things to many people. Some claim that "demand" for a loan is idantical with a completed application. Others apply a less stringent definition and suggest that an "inquiry" or request for an application constitutes demand. Still others, concerned about the potentially powerful effects of prescreening, argue that records maintained by depository institutions cannot reflect demand. These individuals feel that sometimes people who want loans never request or inquire about them because they are discouraged over the possibility of ever obtaining one. Thus, demand is not only hard to establish but is also hard to define.

In spite of the debate over what constitutes demand, the fact is that proving redlining or discrimination requires knowledge of the demand for loans. Both redlining and discrimination can only occur when demand for loans in some form exists. That a disclosure statement indicates that no loans were made in an area does not, by itself, establish the presence of either redlining or a discriminatory lending practice because of the possibility that either no loans were requested or those requested were denied on legitimate grounds of safety and soundness. Furthermore, the fact that loans were requested in an area and not made does not prove discrimination because discrimination is established only when it is shown to be directed against the characteristics of individual loan applicants. Only by establishing that an individual was denied a loan or given less favorable terms because of a prohibited basis (e.g., race, location of dwelling, national origin, etc.) can the presence of redlining or discrimination be demonstrated. Thus, an analysis of data on demand showing differential treatment predicated upon a prohibited basis is needed for a finding of redlining or discrimination.

Depository institutions, on the other hand, cannot defend a lending pattern that does not serve all segments of its community by simply saying that no loans were requested from certain geographical areas or segments of the population in their community. CRA requires that depository institutions take steps to ascertain the credit needs of their community and to make members of the community aware of their credit services. Assuming these efforts are satisfactory, then, the actual applications and inquiries need to be considered alongside the types of credit granted. For purposes of assessing the four compliance requirements that are related to geographic patterns of lending (i.e., location of dwelling, CRA assessment factors (e) and (i), and the CRA special consideration of low- and moderate-income neighborhoods), demand data need to be arrayed and assessed with lending information on the basis of the geographical areas of interest. An examination of deposit information may also be important for purposes of assessing CRA requirements.

An assessment of compliance requirements such as race and age of dwelling can be made on the basis of geographic areas or independently of geographic areas. In either case, data on the demand for loans must be arrayed and assessed against lending information based on the variables of interest. As discussed earlier, the other compliance requirements (e.g. sex, marital status, age of borrower, etc. must generally be assessed independently of geographic areas. Here again, data on the demand for loans must be arrayed and assessed with lending information on the basis of the variables of interest.

Determination of Compliance with CRA: The purpose of the Community Reinvestment Regulation is in part, to "encourage *depository institutions* to help meet the credit needs of their local community or communities. including low-and moderate-income neighborhoods." The regulations promulgated pursuant to CRA list 12 factors to be considered by examiners in assessing an institution's record of performance in meeting these credit needs. Nine of these factors are qualitative in nature. These relate to actions taken by the bank that demonstrate a good faith attempt to define and meet the credit needs of its local community. Included here are such items as: activities conducted by the bank to ascertain credit needs, extent of marketing and special credit related programs the institution's ability to meet various community credit needs, and the institution's participation in local community development and redevelopment projects or programs.

Two factors are quantitative and involve the use of demographic information. These are:

(e) geographic distribution of the *depository institution's* credit extensions, credit applications, and credit denials; and

(I) Origination of residential mortgage loans, housing rehabilitation loans, home improvement loans, and small business or small farm loans within its community, or the purchase of such loans originated in its community.

as discussed previously, the use of home mortgage disclosure data is directly relevant to these two factors because their assessment requires data on loan originations and purchases [illegible] geographically.

In factor (F) — the CRA regulations [illegible] by implication, the prohibited acts enumerated in Title VIII and ECOA. Under this factor, the examiner looks for "evidence of prohibited discriminatory or other illegal credit practices." This provision means discrimination based on race, sex, age of dwelling, etc. [illegible]

Clearly, the 12 CRA assessment factors allow the regulatory agencies considerable latitude in determining whether an institution is serving the credit needs of its community. A determination of compliance with CRA requires informed judgments on all 12 assessment factors. Mortgage disclosure data clearly provide quantitative data in a form useful for assessing two of these factors, but, even here, further data and analyses are needed before these two factors can be assessed fully.

4.2 CURRENT USE OF MORTGAGE DISCLOSURE DATA BY THE REGULATORY AGENCIES

A brief survey was conducted to determine the extent to which home mortgage disclosure data are currently being utilized by the Federal Home Loan Bank Board and Federal Deposit Insurance Corporation in their compliance activities. The results of the survey indicate that these data are currently being used essentially as an alerting mechanism and that the impetus and the focus for their use is the Community Reinvestment Act.

The survey was conducted by first discussing with representatives of the Federal Home Loan Bank Board and Federal Deposit Insurance Corporation the policies and procedures for use on the mortgage disclosure data. These discussions covered the current use of these data in compliance examinations as well as their use in civil rights and compliance investigations. Following these discussions, arrangements were made for telephone discussions with district examiners and civil rights specialists Telephone interviews were conducted with specialists and examiners from the First and Fourth FHLBB Districts, and the FDIC Madison and New York regions. Answers to the following questions were sought during these discussions:

1. What guidance or directives has the Agency issued to examiners regarding the use of mortgage disclosure data in compliance examinations?
2. Specifically, how are examiners and civil rights specialists using mortgage disclosure data in compliance examinations?
3. How is demographic information obtained and used, and what are the problems associated with its use?
4. Are the home mortgage disclosure data valuable in determining compliance, and what would the impact be if the Act were discontinued and the data became unavailable?
5. How are depository institutions delineating their local communities?

In the following paragraphs, answers to these five questions and other findings are summarized.

4.2.1 Instructions to Examiners

Representatives from both the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation indicated that examiners have been "instructed" to use the home mortgage disclosure data in their compliance examinations. The specific methods for the use of these data, however, are not prescribed. Instead, decisions on the particular procedures for its use are left to the judgment of the field examiners and civil rights specialists.

4.2.2 Current Use of the Data in Compliance Examinations and Investigations

Field examiners and civil rights specialists are currently using home mortgage disclosure data as an integral part of compliance examinatious and civil rights investigations. This finding is highly significant in light of the fact that the Home Mortgage Disclosure Act was not initially intended as an enforcement tool but rather as a means to learn how depository institutions are investing the deposits entrusted to them.[illegible] Use of the data is, of course, confined to examinations of institutions located inside standard metropolitan statistical areas and with assets of 10 million or more, since institutions not meeting these criteria are not required to prepare disclosure statements. The specific procedures for using mortgage disclosure data vary significantly, but essentially it serves as an "alerting mechanism" as described in the analysis of practical uses

The regulatory agencies have been using home mortgage disclosure data as a part of compliance examinations and civil rights examinations from the time Regulation C became effective. The passage of the Community Reinvestment Act and the promulgation of the Community Reinvestment Act regulations, however, extended this use. CRA's mandate that the regulatory agencies encourage regulated depository institutions to serve the credit needs of their local communities, and assessment factors (e) and (i) which require evaluation of an institution's distribution of credit extended the evaluation of home mortgage disclosure data during compliance examinations. In the brief period of time since the Act and regulations became effective, field personnel have developed additional procedures for using the mortgage disclosure data in conjunction with demographic information to detect possible patterns of redlining or discrimination.

Some persons interviewed indicated that use of the data is restricted to examining compliance with CRA, while others said its use also extends to examining compliance with certain of the prohibited bases established under Title VIII and and ECOA. A brief summary of four procedures in current use is shown in Figure 4.4. The use of maps and lending data for multiple years varies from one procedure to another. Still, in all three instances the mortgage disclosure data are used in conjunction with demographic information as an alerting mechanism to detect possible discriminatory lending patterns or practices. Importantly, an examiner's and civil rights specialist's ability to use the mortgage disclosure data in this way is circumscribed by the availability of appropriate demographic information.

PROCEDURE #1

1. Obtain demographic information for census tracts or neighborhoods in areas under study.
2. Review the mortgage disclosure statement for the current year to determine if there appears to be a pattern of discrimination.
3. Determine if any complaints have been filed against the institution.
4. Examine pattern of lending further by using disclosure statements and other sources to plot loans for three to five previous years on a map if step 1 or 2 indicates possible discriminatory lending patterns or practices.
5. Investigate the demand for loans and the efforts taken to stimulate demand in underserved areas if step 4 indicates the possibility of discriminatory lending.

PROCEDURE #2

1. Obtain demographic information for census tracts or neighborhoods in areas under study.
2. Obtain a census tract map and shade by demographics (e.g., income, race, etc.)
3. Plot the number of loans from most recent disclosure statement the map.
4. Plot the dollar amounts of the loans on the map if the pattern of lending shows the possibility of discriminatory lending patterns of practices.
5. Use the loan application register to examine demand and the characteristics of applicants and recipients if steps 1-4 show possible discriminatory lending patterns or practices.

PROCEDURE #3

1. Obtain demographic information for census tracts or neighborhoods in areas under study.
2. Review the mortgage disclosure statement for the current year to determine if there appears to be any pattern of discrimination.
3. Investigate the demand for loans and efforts taken to stimulate demand in underserved areas if the pattern of lending or existing complaints shows the possibility of discriminatory lending patterns or practices.

PROCEDURE #4

1. Obtain demographic information from local sources (e.g., cities) and identify census tracts with low income and minority population.
2. Using state disclosure statement for 1976, identify the census tracts with no loans originated.
3. Using state disclosure statement for 1976, color code a census tract map with the number of loans originated in terms of the following categories: 0 loans, 1-4 loans, 5-15 loans, 16-25 loans, greater than 25 loans.
4. Overlay demographic information on the color coded census tract map.
5. Use state aggregate portfolio data to compute the following ratio for census tracts with no originations in 1976;

$$\text{Ratio}=\frac{\text{Outstanding \$ balance of loans in census tract}}{\text{Number of loans in census tract}}$$

(Note: This ratio provides insight into the age of loans in that low ratios imply old loans.)

7. Compare originations in 1977 with those in 1976; and, in some cases, plot 1977 data on map.

8. Since 1978 disclosure statements are not available until September 1979, obtain a three-month sample of applications and originations from loan application register and color code on map (denied, closed, etc.).

9. Make a physical tour of the areas within the census tracts in question, and discuss steps taken to stimulate lending.

FIGURE 4.4: EXAMPLES OF CURRENT PROCEDURES FOR USING MORTGAGE DISCLOSURE DATA IN DETERMINING COMPLIANCE

4.2.3 The Availability of Demographic Information

Interviews with field examiners and civil rights specialists revealed significant problems encountered in obtaining current demographic information. The Federal Home Loan Bank Board has supplied its field examiners and civil rights specialists with 1970 demographic information for use in examinations; however, the Federal Deposit Insurance Corporation has, as of yet, not provided this information to its field staff. The 1970 demographic information is nearly ten years old, however, and therefore does not reflect changes in income, racial composition, etc. occurring over the past nine years. In an effort to classify census tracts more fully and accurately, field examiners and civil rights specialists attempt to obtain demographic information from local sources. Regional, county, and city planning commissions are sometimes able to provide some of this information.

The FHLBB civil rights specialist emphasized the need for additional demographic information, indicating the desirability of using information reflecting the number of houses of various types (e.g., 1-4 family) in each census tract. Knowledge of characteristics such as the number of houses, total population, and the housing density in an area can aid examiners in judging the appropriateness of an institution's record of lending.

Areas outside of SMSAs are, of course, generally not subdivided by census tracts. For these areas, demographic information is available only in terms of other geographic subdivisions, e.g., counties, minor civil divisions). Home mortgage disclosure data are not relevant for use in these areas since disclosure statements are prepared only for properties within SMSAs.

4.2.4 The Value of Home Mortgage Disclosure Data in Compliance Determinations and the Impact of its Loss

All interviewed were asked if home mortgage disclosure data are valuable in determining compliance with antidiscrimination acts and regulations. The unanimous response was that mortgage disclosure data are a valuable tool in the compliance examination process.

In spite of the limitations in the nature and usefulness of home mortgage disclosure data, all agreed that the examination process would suffer greatly if the data became unavailable. "We do feel it is a valuable tool," a representative of the Federal Home Loan Bank Board stated.

> We would not be happy if it were lost, and if we did lose (the data) we would recommend that current regulations be revised to get that type of information.

The reason behind this observation is, as one representative of the Federal Deposit Insurance Corporation put it, "because there is nothing at all like it to replace it." Although examiners have data on the census tracts of loans available to them on loan rosters this information is not aggregated. Data in nonaggregated form is useful only for the most preliminary determination of whether institutions are discriminating based on the location of property, or if their lending patterns indicate that they are serving the credit needs of their local communities. Furthermore such preliminary determinations using nonaggregated data are only feasible in smaller institutions where the sheer number of loans is not overwhelming. One examiner summarizes the point this way;

> Home mortgage disclosure data are not the ultimate answer. Nevertheless, they are better than nothing and thus discontinuing them would mean the loss of a helpful tool. If lost, they would have to be replaced with something.

It should be noted, however, that all field examiners and civil rights specialists interviewed stopped short of saying that the Home Mortgage Disclosure Act itself should be continued. Although they acknowledged the usefulness of home mortgage disclosure data as a compliance tool they were sensitive to other issues such as the burden incurred in preparing the statements and the level of use by the public. Consequently they all felt compelled to make no recommendation about continuation of the Act.

4.2.5 Delineation of Local Communities

The extent to which home mortgage disclosure data are useful in determining compliance with CRA is largely dependent on the method chosen by depository institutions to delineate their local communities. The two types of delineations which render home mortgage disclosure data most useful are those which: correspond precisely to census tracts, or are large and encompass many census tracts Conversely the type of delineations which render home mortgage disclosure data less useful are those with circularly or irregularly shaped boundaries that cut across a large percentage of the census tracts that are included within the local community. The relationship between usefulness of the data and the method of delineation derives from the fact that both home mortgage disclosure data and demographic information are aggregated at the census tract level. In cases where census tracts intersect the delineated boundaries, it is not possible to determine which of the loans shown in aggregated form fall inside and which outside of the boundaries or whether the demographic characteristics inside the boundaries are similar to those outside. Thus delineations which intersect a large percentage of the census tracts significantly reduce the users ability to make meaningful comparison of demographic information and loan information aggregated at the census tract level.

Representatives of depository institutions, field examiners, and civil rights specialists were asked how local communities were being delineated. The response was varied Institutions in the San Diego area most frequently delineate local communities by the entire SMSA or a major portion of the SMSA. In Chicago, however, a significant number of institutions delineate local communities by circles drawn around their office locations. In other regions, such as New York, Michigan, and Wisconsin, large areas such as SMSAs, major portion of SMSAs, counties or townships (in New York) were most generally used, but a lesser number used circles drawn around their offices or natural boundaries (e.g. roads) approximating these circular areas. Thus, this limited survey reveals that while one method of delineating local communities may be dominant in a particular region, a variety of methods are employed overall.

4.3 USE OF HOME MORTGAGE DISCLOSURE DATA BY THE PUBLIC AND DEPOSITORY INSTITUTIONS

This section discusses the use of home mortgage disclosure data by the public and depository institutions. Use by the public is analyzed in terms of two issues. Briefly, there are: What uses can the public make of the data?; and, are the public in fact making use of the data? Use by depository institutions covers two major topics. One topic addresses industry's perceptions of the usefulness of the disclosure statements These perceptions are based primarily on the volume of requests for and the content of, the home mortgage disclosure statements. The other topic addresses the uses of the data by depository institutions. The views of the public and depository institutions represent both ends of the spectrum of opinion on the use and usefulness of disclosure statements. Viewed together, these contrasting views clearly establish the lines of debate on the issue of the usefulness of home mortgage disclosure data. The final part of this section summarizes this debate without attempting to resolve it.

The discussion in this section is based upon a limited amount of information on public and depository institution usage gathered during the course of the study. It is not based upon a complete survey which was beyond the scope of the study Information on the amount of use by the public was obtained in visits to 44 depository institutions, discussions with representatives of the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation, and from published reports. These sources also provide the basis for the discussion of depository institution use.

4.3.1 Use by the Public

The purpose of the Home Mortgage Disclosure Act, in part, "is to provide ...citizens and public officials of the United States with sufficient information to enable them to determine whether depository institutions are filling their obligations to serve the housing needs of the communities and neighborhoods in which they are located...." Thus, the Home Mortgage Disclosure Act itself establishes use of the data by the public as an important consideration.

[illegible] by the public [illegible] compliance with [illegible] the public claims [illegible] requirements [illegible] are met, the [illegible]. Indeed, it [illegible] of ensuring that [illegible] when they are [illegible] and by the agencies [illegible]

[illegible] Public?:
[illegible] that the public can [illegible] of lending among [illegible] investigation to determine [illegible] requirements. The [illegible] of lending at the census [illegible] because they do [illegible] or for the [illegible]

[illegible] distinguish individual [illegible] representing consumer, [illegible] are most likely to seek [illegible] whether a particular institution [illegible] community. Researchers, [illegible] consumer groups, on the other hand [illegible]

- [illegible] the credit needs of a [illegible]
- Determine if a [illegible] either by one, or by a group of [illegible]
- Determine if an [illegible] is discriminating in its [illegible]

Few individual citizens possess the desire, knowledge, or resources to make full use of the data described in the analysis of potential uses. Nevertheless, their interest is not in finding patterns of redlining or discrimination, but in judging whether a given institution is meeting the needs of its local community. The data are potentially useful to these individuals in helping to make such a determination.

Public interest, consumer and housing groups, and local officials, on the other hand, do potentially possess the knowledge and resources needed to obtain and use mortgage disclosure data and demographic information in the role of an alerting mechanism for both redlining and discrimination. In addition, CRA provides these groups with access to both the delineation of the local community and the types of credit extensions offered by each depository institution, as well as the steps each institution has taken to stimulate lending in all segments of its local community. Futhermore, CRA has fostered an increased interest on the part of public interest groups in obtaining information on the volume of deposits from a local community. Such information has been sought by these groups to allow them to compare the pattern of deposits against the pattarn of lending in an area. Like demand data, however, the public does not have access to reliable information on deposits stemming from local communities. These conditions impose limitations on the use of home mortgage disclosure data by the public. In light of these limitations, public officials and consumer groups can use home mortgage disclosure information to determine compliance in the following ways:

1. Determine which census tracts within a depository institution's defined local community are receiving no loans or few loans.

2. Determine from the CRA information and discussions with parsonnel from the depository institution the steps that have been taken to stimulate lending in these areas.

3. Determine whether possible patterns of disinvestment of geographic discrimination appear possible

4. Determine from demographic information whether the census tracts that appear to be underserved with mortgage lending are characterized by any of the prohibited bases such as low income, minority populations, or oldar houses.

5. If patterns of discrimination appear possible in either step 3 or step 4, request the appropriate regulatory agency to conduct an investigation to insure a definitive compliance determination and to require that appropriate actions be taken.

Thus public interest groups and local public officials can use mortgage disclosure data to detect differentials in lending among census tracts. They can use demographic information to determine the housing and population characteristics of each census tract and to determine whether there appears to be a significant difference in lending in the census tracts characterized by the prohibited bases (e.g. minority population, low income, older houses, etc. They can use the information to determine the efforts made to stimulate loans in these areas. They can and do bring their evidence and concerns to the attention of regulatory agencies who can and do perform a thorough investigation to determine if discriminatory practices occurred and to see that appropriate corrective actions are taken.

Even with home mortgage disclosure and complete demographic data, however the public cannot detect all patterns or forms of discrimination and they canno prove redlining or discrimination on any prohibited basis. There are several reasons for this.

First, population and housing characteristics are not necessarily homogeneous throughout a census tract. Thus, significant amounts of lending in a particular census tract does not necessarily mean that all people, houses, or areas were afforded similar consideration. Second, the demographic information (assuming it is current and accurate) shows the characteristics of the people and houses in the census tract but shows nothing about the loan applican or prospective applicants. These characteristics and their impact on the treatment of the loan application must be known and compared against the loan recipients before discrimination can be established. Third, discrimination can occur not only in the decision to make a loan but also in the terms and conditions of the loan. Access to the terms and conditions of loans is necessary, therefore, before this type of discrimination can be detected and proven. Thus, it is clear that under current circumstances, the public does not have the requisite information with which to detect all forms of redlining or discrimination or to prove any form of either.

Are tha Public in Fact Making Use of the Data?: During the Accuracy phase of this study, a limited survey was performed to determine the number of requests by the public for disclosure statements. Forty-four institutions in San Diego, Buffalo, and Chicago provided information on the number of requests they had received for their fiscal year 1977 disclosure statement. The results of this survey are shown in Table 4.1. The data indicate that forty percent of these institutions had received no requests from the public for their disclosure statements, while 18 percent had received only one request. Overall, 91 percent of institutions received six or fewer requests.[18]

TABLE 4.1: NUMBER OF REQUESTS BY THE PUBLIC FOR MORTGAGE DISCLOSURE STATEMENTS

Number of Requests(R)	Number of Institutions(I) with 'R' Requests	Percentage of Institutions with 'R' Requests	Percentage of Institutions with 'R' or Fewer Requests
0	18	40.9	40.9
1	8	18.2	59.1
2	4	9.1	68.2
3	3	6.8	75.1
4	3	6.8	81.9
5	0	0	81.9
6	4	9.1	91.0
7	2	4.5	95.5
8	2	4.5	100.0

A more extensive study of requests for disclosure statements was performed by the United States League of Savings Associations. That group surveyed 2,800 savings and loan associations to determine the number of requests for the report. The League found that 71 percent of the 1,943 responding associations indicated they had not received a single request for their 1977 fiscal year disclosure statement. Overall, 99 percent of those responding had received five or fewer requests.[19]

The results from both surveys are consistent, and indicate decisively that disclosure statements are not being requested by members of the public in large numbers. Indeed, the average number of requests of each institution is very small by any measure. This observation, however, does not necessarily lead to the conclusion that insignificant use is being made of the disclosure statements. Although the number of requests for disclosure statements is an important indicator of overall use, it is by no means the only factor to be considered. One request for a disclosure statement, particularly if made by a consumer group, member of the media, or researcher, can result in wide-spread use by many who are subsequently provided with the data or with the results of the analysis. Furthermore, results from the study conducted by the [illegible] indicates precisely this trend in use of the disclosure reports. Their study found that of all requests, 32 percent were made by housing, consumer and community activist groups, 20 percent were made by private citizens, and [illegible] percent made by the press and public officials.[19]

A study of disclosure statement use in the District of Columbia conducted by James C. Sivon, Director of Investigations and Research for the House Banking Committee, gives insight into the range of uses that can result from a limited number of requests for the data. Although Sivon's study of the number of requests was consistent with the low levels reported earlier, his survey of consumer and community groups indicated a wide range of uses currently being made of the data. These included:

- Use of the home mortgage disclosure data to prepare the latest [illegible] housing plan.
- Use of the data in petitioning financial institutions on branching and lending policies. An example is use of the data to develop a [illegible] agreement between a large Washington based savings and loan association and the Adams-Morgan Community.
- Use of the data by groups outside the city, such as New York Public Interest Research Group, and National Peoples Action, among others.
- Indirect use of data by many groups through reliance on extensive work done by the D.C. Commission on residential mortgage investment [illegible]

Thus, studies reporting simply the number of requests for disclosure statements may be misleading. As Sivon reports, "one request can often represent the interests of an entire neighborhood or group of individuals."[20]

4.3.2 Use by Depository Institutions

Depository institutions hold a radically different view of the use of home mortgage disclosure data than do public interest and consumer groups. Their perception is that these data are either little used or actually misused.

The small number of requests of disclosure statements provide the basis for the industry conclusion that the statements are little used. One respondent to the United States League of Savings Association's survey told the following story:

> We had the first (HMDA) report printed in hundreds of copies. Nobody cared. The second report we had about 50 copies printed. Nobody cared. The last report we got smart and only made an original and one copy. It proved to be two more than needed.

The frustration of the respondent is reflected in his conclusion, "I call it (the report) consumer fraud."[19]

The perception that the home mortgage data are being misused derives from the sense that the public does not understand or appreciate the limitations in the data. A representative of one savings and loan in California commented, "The general public does not understand the census tract concept. It shows only loans recorded and does not take into consideration demand for loans in an area. It can, therefore, be very misleading."[18]

These fears have a basis in reality, for home mortgage disclosure data have, on occasion, been used imprecisely and as the basis for misleading

parallel those in this study. He observes:

> "...if you talk to the various members of industry, you are told that the purpose of the Act has not been satisfied because the consumer and community groups are not requesting and using the disclosure data. If you talk with consumer and community groups, a contrary picture emerges."[20]

No amount of additional evidence on the degree of usage is likely to alter these opposing views. The salient facts to be considered in the debate are:

- Mortgage disclosure statements are the only means by which the interested public can review the geographic pattern of mortgage lending by depository institutions.
- The mortgage disclosure statements are being used by public interest groups in a number of the 270 SMSAs, and these groups believe strongly these statements are a necessary and valuable tool in identifying and detering redlining and discrimination.
- A significant percentage of the mortgage disclosure statements go unused by the public.
- Mortgage loan data, aggregated at the census tract level, are used by the regulatory agencies as an integral part of their compliance examinations and investigations.
- Although home mortgage disclosure statement provide the only currently available source of mortgage loan data aggregated at the census tract level, other sources, such as loan rosters, provide a way of obtaining this data.

This report has shown how mortgage disclosure data can be used, and discusses how it is being used by the regulatory agencies and the public. It is hoped that these discussions will be helpful in addressing the two major issues associated with the Home Mortgage Disclosure Act: Should the Act be extended?; and, if extended, should it be expanded to include additional information? Resolving these issues involves a set of complex considerations beyond the scope of this report. These considerations include the cost of providing the data and the other alternative means for obtaining such information. Other reports will, in part, address these issues. The issues related to

[illegible]

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2. Congress of the United States, "The Fair Housing Act," 24 USC 3601, et. seq.

3. Federal Deposit Insurance Corporation, "Fair Housing Regulation," 12 CFR 338.

4. Federal Home Loan Bank Board Regulation Parts 528, 531.8, "Non-Discrimination Requirement, Statements of Policy: Guidelines Relating to Non-Discrimination in Lending," 12 CRF 528, 531.8.

5. Congress of the United States, "The Equal Credit Opportunity Act," 12 USC 1691, et. seq.

6. Board of Governors, Federal Reserve System, "Equal Credit Opportunity," Regulation B, 12 CFR 202.

7. Congress of the United States, "The Community Reinvestment Act," Public Law 95-128.

8. Federal Deposit Insurance Corporation, et. al., "Community Reinvestment Act Regulations," 12 CFR 345 (for FDIC)

9. Board of Governors, Federal Reserve System, "Home Mortgage Disclosure," Regulation C 12 CFR 203.

10. Each regulatory agency published Community Reinvestment Act Regulations for their own subject institutions. Although these sets of regulations are identical in content, they differ in their references to subject institutions. For purposes of this report, all such references have to be changed to "depository institutions," and placed in italics to indicate the change.

11. Governor Philip Jackson, "Oversight on the Home Mortgage Disclosure Act and Equal Credit Opportunity Act, United States Senate Committee on Banking, Housing, and Urban Affairs." November 23, 1976.

12. Senator William Proxmire, "Congressional Record," December 15, 1975, S22226. This observation reflects Senator Proxmire' generalization of the legislative intent of the Home Mortgage Disclosure Act.

13. JRB Associates Inc "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas - Utility of the Home Mortgage Disclosure Act, November 1979.

14. JRB Associatss, Inc. "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas - Utility of the Home Mortgage Disclosure Act, Cost of Compiling Home Mortgage Disclosure Statements," November 1979.

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

COMPLETENESS: An Estimate of the Total Volume of Residential Mortgage Loan Originations, and the Percentage Attributable to Depository Institutions Subject to Federal or State Disclosure Reporting.

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by:

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8400 Westpark Drive
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November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

TABLE OF CONTENTS

Page

FOREWORD i

SUMMARY iii

1. INTRODUCTION 1-1

  1.1 Purpose 1-1
  1.2 Scope 1-1
  1.3 Methodology 1-3
    1.3.1 Analysis at the County-wide Level 1-3
    1.3.2 Analysis of the Largest County in the SMSA 1-4
    1.3.3 Criteria for Data Use 1-5
    1.3.4 Obtaining Data 1-6
    1.3.5 Data Validation, Processing, and Analysis 1-9
  1.4 Contents of this Report 1-11

2. LENDERS AND THE NATIONAL LENDING PATTERN 2-1

  2.1 The National Lending Pattern 2-1
  2.2 Activity by Individual Lender-types 2-2
    2.2.1 Savings and Loan Associations 2-2
    2.2.2 Commercial Banks 2-4
    2.2.3 Mutual Savings Banks 2-5
    2.2.4 Mortgage Companies 2-6
    2.2.5 Miscellaneous Lenders 2-6
  2.3 Summary 2-7

3. SAN DIEGO COUNTY 3-1

  3.1 The San Diego Data 3-1
  3.2 Data Validation and Processing 3-7
    3.2.1 Editing the Data Base 3-8
    3.2.2 Validation and Comparison Against Other Sources of Data 3-13
  3.3 Completeness Analysis for San Diego 3-19
  3.4 Observations 3-21

TABLE OF CONTENTS (Cont'd)

Page

4. ERIE COUNTY 4-1
    4.1 The Buffalo Data 4-1
    4.2 Data Entry, Validation, and Processing 4-2
    4.3 Completeness Analysis for Erie County 4-7
    4.4 Observations 4-11

5. COOK COUNTY 5-1
    5.1 The Cook County Data 5-1
    5.2 Data Entry, Validation, and Processing 5-4
    5.3 Completeness Analysis for Cook County 5-8
    5.4 Observations 5-8

6. COMPARISON OF LENDING PATTERNS AND STUDY FINDINGS 6-1
    6.1 Mortgage Lending Patterns 6-1
        6.1.1 Completeness at the National and County Levels . . . 6-1
        6.1.2 Variation in Mortgage Lending by Depository institutions 6-6
        6.1.3 Mortgage Companies and Other Lenders 6-8
        6.1.4 Impact of Exemptions 6-9
        6.1.5 Dominance by a Few Lenders 6-9
    6.2 Lessons Learned in Acquiring and Using Data for the Completeness Analysis 6-11
        6.2.1 The Need for Explicit Criteria 6-12
        6.2.2 The Use of Home Mortgage Disclosure Statements . . . 6-12
        6.2.3 Matching Data from County Offices and Title Companies to Regulation C Criteria 6-15
        6.2.4 Suggestions for Improving the Criteria for Including Mortgage Loans in Disclosure Statements . . 6-16
    6.3 Summary of Findings 6-16

Reference R-1
Appendix A A-1
Appendix B B-1
Appendix C C-1
Appendix D D-1
Appendix E E-1
Appendix F F-1

LIST OF TABLES

Page

Table S.1: Percentage of the Dollar Volume of Residential Mortgage Loan Originations in 1977 vii

Table S.2: Percentage of the Dollar Volume of Residential Mortgage Loan Originations by Various Lenders in 1977 vii

Table S.3: Percentage of the Dollar Volume of Residential Mortgage Loan Originations by Depository Institutions viii

Table 2.1: Major Participants in the 1977 Residential Mortgage Market 2-3

Table 3.1: Data Element Definitions 3-4

Table 3.2: Rejection Criteria for San Diego Data 3-9

Table 3.3: Results of the Edit of the San Diego File 3-10

Table 3.4: Comparison of Data for a San Diego Savings and Loan Association 3-15

Table 3.5: Mortgage Loan Originations in San Diego County During 1977 3-20

Table 4.1: Erie County Data Element Definitions 4-5

Table 4.2: Number of Mortgage Loans Originated in Erie County During 1977 4-8

Table 4.3: Mortgage Loan Originations in Erie County During 1977 4-9

Table 4.4: Percentage of the Dollar Amount of Mortgage Lending in Erie County During 1977 4-10

Table 5.1: Cook County Data Element Definitions 5-5

Table 5.2: Code Verification Process 5-7

Table 5.3: Mortgage Loan Originations in Cook County During 1977 5-9

Table 6.1: Comparison of the Amount of Residential Mortgage Loan Originations during 1977 6-2

Table 6.2: Comparison of Residential Mortgage Loan Originations during 1977 6-3

Table 6.3: Percentage of Mortgage Lending by Depository Institutions 6-10

Table 6.4: Percentage of the Dollar Volume of Residential Mortgage Loan Originations in 1977 6-17

Table 6.5: Percentage of the Dollar Volume of Residential Mortgage Loan Originators by Various Lenders in 1977 . . 6-18

Table 6.6: Percentage of the Dollar Volume of Residential Mortgage Loan Originations by Depository Institutions. . 6-19

LIST OF TABLES (Cont'd)

Page

Figure 3.1: Nationwide Real Estate Register Process 3-3

Figure 3.2: Comparison of the Number of Loans on Three Rosters . . 3-14

Figure 4.1: Sample of Mortgage Loan Listed in the
Buffalo Daily Law Journal 4-3

Figure 5.1: Sample of Chicago Title Listing 5-3

Figure 6.1: COMPLETENESS: Percentage of Mortgage Monies
Originated by Institutions Subject to HMDA 6-5

Figure 6.2: Variation in Lending by Depository Institutions
Subject to the Home Mortgage Disclosure Act 6-7

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

This report presents a completeness analysis of residential mortgage lending in Cook County, Illinois; San Diego County, California; and Erie County, New York. The purpose of the completeness analysis was to estimate the number and amount of residential mortgage loans originated by various types of lenders in each county and to determine the percentage of the total volume attributable to depository institutions subject to Federal or state disclosure reporting.

SCOPE AND METHODOLOGY

In Phase 1 of this study, mortgage disclosure statements showing the volume of lending in the 1977 fiscal year by depository institutions subject to reporting under Regulation C[1] or a comparable state regulation were collected and compiled for the three Standard Metropolitan Statistical Areas (SMSAs) of the study--Chicago, San Diego, and Buffalo. This compilation, however, does not reflect the complete volume of lending in the three SMSAs. The completeness analysis completes the total lending picture by providing quantitative estimates of the amount of lending by all lenders.

This analysis provides an improved basis for understanding and interpreting the mortgage lending patterns of depository institutions subject to disclosure reporting by showing the amount of lending by the following other types of lenders:

- Savings and loan associations not subject to disclosure reporting in an SMSA because they claim assets less than $10 million, or have no office within the SMSA
- Banks not subject to disclosure reporting in an SMSA because they claim assets less than $10 million or have no office within the SMSA

- Mortgage companies
- Miscellaneous companies (e.g., insurance companies)
- Private parties (e.g., seller-financed).

The national lending pattern of depository institutions and these other lenders is discussed and compared against the lending patterns within the three counties. These analyses provide quantitative estimates of the degree of incompleteness portrayed by compilations of disclosure statements as well as insights into the reasons for the variations among the counties. To accomplish the completeness analysis, data on the mortgage lending activity of these other types of lenders had to be found, validated, and analyzed. The methodology used to accomplish this task involved the following steps:

- Identification of the alternative sources of mortgage loan data for each county
- Evaluation of the alternative sources and selection of the most appropriate source in each county
- Acquisition of data for each county
- Validation and processing of the data to obtain estimates of the relative fraction of lending by each type of lender
- Analysis of the findings.

A two-stage goal was established for the acquisition and use of data for each county:

- Acquisition: Obtaining a data base of all mortgage loan originations by all lenders within the county in 1977
- Use: Selecting mortgage loans from the data base in accordance with the criteria of Regulation C.

A data base containing all 1977 mortgage loan originations involving a change of property title was obtained for each county. Because these data were derived from the records of the county recorder's office or a title company, they included all mortgage loans except those that were assumed or refinanced. These are not included because they do not involve changes in property title.

Assumed, refinanced, and construction loans are discussed at length in this report because: 1) the criteria for their inclusion on disclosure statements is ambiguous, and 2) depository institutions generally are not reporting these loans in accordance with the intent of Regulation C. As part of this study, a measure of the impact of inclusion or exclusion of these loans from disclosure statements was derived for San Diego County. Our analysis, described in Chapters 3 and 6, indicates that the volume of assumed and refinanced loans represents a significant percentage of the total volume of mortgage loan originations, and that the criteria for including them on disclosure statements need to be defined more explicitly.

The goal of selecting loans from each data base in strict accordance with Regulation C criteria was accomplished only insofar as the data for each county would permit. The available data on mortgage originations for Cook and Erie counties did not include loan, borrower, or property characteristics to allow mortgage loans for business purposes or properties to be eliminated. The data for San Diego included 25 data elements on each transaction, and these allowed a more extensive set of selection criteria to be applied than was possible in the other two counties. In all three counties, an upper limit for loan value was applied to exclude large construction and business property loans. The criteria used in each of the three counties are described in detail in Chapters 3, 4, and 5. The resulting data base for each county provides complete mortgage lending data for 1977 in terms of these specified criteria.

Three reasons preclude a direct comparison of the completeness data and the data compiled from the disclosure statements in Phase 1 of the study. First, the mortgage data for the completeness analysis is based upon calendar year 1977; whereas, the mortgage data in the disclosure statements are based upon the 1977 fiscal years of the various depository institutions. Since the fiscal years of many of the savings and loan associations in Chicago do not end on December 31, the disclosure statements compiled in Phase 1 are not based on a common time period. Second, the disclosure statements prepared by depository institutions under the auspices of the State of Illinois combine both mortgage loan originations and purchases. The number and amount of each cannot be determined for comparison with the completeness data which include only mortgage loan originations. Finally, the disclosure statements are prepared for the entire SMSA; whereas the completeness analysis is restricted to the single largest county both in terms of population and loans in the SMSA. Because of these three limitations the estimates derived from the completeness analysis can serve only as an approximation of the relative share of mortgage lending reflected by the disclosure statements The completeness analysis does, however, provide valid estimates of the relative volume and percentage of mortgage lending by depository institutions and other lenders in calendar year 1977.

FINDINGS

Three types of findings were derived from the study. First, quantitative estimates of the volume and percentage of lending by various types of lenders were obtained for the nation, and derived for the three counties in the study. Second, some of the major reasons for the variations in the lending patterns among the three counties were determined. Finally, a number of important lessons were learned during the process of acquiring, validating, and processing mortgage loan data in accordance with Regulation C criteria. These, too, are discussed in this report.

The National Pattern of Mortgage Originations: In 1977, over $173 billion in residential mortgage loans were originated in the United States. All depository institutions (i.e. commercial banks, mutual savings banks, and savings and loan associations)--both those subject and not subject to disclosure reporting--originated 81.8 percent of this total volume in 1977.

For purposes of later analysis, it is useful to compare the national pattern of mortgage loan originations by various types of lenders against the patterns by those lenders in the three counties. Table S.1 provides a comparison of the percentage of the dollar volume originated by six types of lenders nationally and in the three counties.

The percentages for depository institutions shown in Table S.1 are based upon the combined originations of all institutions and not just those subject to disclosure reporting. Mututal savings banks exist in only 17 states, and in 1977 they held 36 percent of the debt held by depository institutions in these states.

TABLE S.1: PERCENTAGE OF THE DOLLAR VOLUME OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS BY VARIOUS LENDERS IN 1977

LENDER TYPE	NATIONAL	SAN DIEGO COUNTY	ERIE COUNTY	COOK COUNTY
Commercial Banks	22.1	9.5	19.9	21.4
Mutual Savings Banks	5.9	--	42.5	--
Savings & Loan Associations	53.8	54.7	20.1	68.7
Mortgage Companies	13.5	15.7	9.4	5.3
Miscellaneous Companies	4.7	7.4		1.8
Private Parties		12.7	8.1	2.8
TOTAL	100	100	100	100

Percentage of Originations by Institutions Subject to Disclosure Reporting: Table S.2 provides a comparison of the dollar volume originated by depository institutions subject to Federal or state disclosure reporting in each of the three counties. The table shows that the percentage of mortgage lending by depository institutions varied from a low of 62.5 percent in San Diego County to a high of 87.9 percent in Cook County. These data for the three counties reflect the degree to which lending by lenders not subject to disclosure reporting need be taken into account when data on overall lending patterns are assessed.

TABLE S.2: PERCENTAGE OF THE DOLLAR VOLUME OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS IN 1977

	DEPOSITORY INSTITUTIONS SUBJECT TO DISCLOSURE REPORTING	OTHER LENDERS
San Diego County	62.5	37.5
Erie County	81.7	18.3
Cook County	87.9	12.1

Variation in Lending by Depository Institutions: Results from the completeness analysis show that the lending patterns of depository institutions varied considerably among the three counties. The percentage of lending by savings and loan associations, commercial banks, and mutual savings banks subject to Federal or state disclosure reporting, as well as that of other lenders is shown in Table S.3. In this table, only data on lenders subject to disclosure reporting is presented.

TABLE S.3: PERCENTAGE OF THE DOLLAR VOLUME OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS BY DEPOSITORY INSTITUTIONS SUBJECT TO FEDERAL AND STATE REPORTING

LENDER TYPE	SAN DIEGO COUNTY	ERIE COUNTY	COOK COUNTY
SAVINGS & LOAN ASSOCIATIONS	53.2	19.9	66.9
COMMERCIAL BANKS	9.3	19.3	21.0
MUTUAL SAVINGS BANKS	—	42.5	--
OTHERS	37.5	18.3	12.1

Reasons for Variations Among Counties: Many reasons account for the variation in lending patterns among the three counties One significant reason is the presence of mutual savings banks in Erie County but not in San Diego or Cook counties. In Erie County, mutual savings banks originated 42.5 percent of mortgage monies in 1977—more than twice the volume originated by either savings and loan associations or commercial banks Clearly the mutual savings banks in Erie County had a significant impact on the percentage of the monies originated by savings and loan associations. In Erie County, these associations originated a share of loans less than one-half of their national percentage, or their percentage in either of the other two counties.

The percentage of lending by commercial banks in Cook and Erie counties was consistent with the national average of 22 percent; whereas, the percentage of lending in San Diego fell to only 9.5 percent As discussed in Chapter 6, one major cause of this low percentage was the unusually high demand for both commercial and residential mortgage loans in San Diego in 1977 Also important, of course, was the statutory limitations imposed on banks for asset acquisition and the preference of banks for commercial loans over residential mortgage loans.

Mortgage companies, on the other hand, responded to the tight money market in San Diego in their traditional manner. The percentage of mortgage loans originated by mortgage companies in San Diego (i.e., 15.7 percent) was greater than the national average (i.e., 13.5 percent) for these companies and much greater than that in the other two counties.

Impact of Exemptions: The results of the study indicate that the exemptions from disclosure reporting granted to depository institutions in the three SMSAs because of their size or location does not result in a significant omission in disclosure reporting. The mortgage loan originations of depository institutions with assets less than $10 million or with no home or branch office within an SMSA ranged from 0.8 to 2.2 percent of the total dollar volume of mortgage loans that were originated by all depository institutions in each of the three counties. It is important to note, however, that these findings are for three counties only, and thus do not eliminate the possibility that exemptions might have a more significant impact in other areas.

Lessons Learned in Acquiring and Using Data for the Completeness Analysis: A number of important lessons were learned through the process of acquiring, validating, and processing mortgage loan information for the three counties. These can be summarized under three topics:

- The essential relationship between explicit loan selection criteria and understanding the contents of a mortgage loan data base or report
- The nature and implications of ambiguities in the mortgage loan criteria in Regulation C
- The difficulty of getting mortgage loan information from county offices or title companies to match the mortgege loan information on disclosure statements because of the complexity of the loan selection criteria and the inherent limitations of the criteria codes in title company or county office data.

These topics are discussed in Chapter 6, and a two-step process is suggested for improving the criteria for inclusion of mortgage loans in disclosure statements.

CHAPTER 1

INTRODUCTION

1.1 PURPOSE

This report presents a "completeness" analysis of residential mortgage lending in Cook County, Illinois; San Diego County, California; and Erie County, New York--the three counties selected for study. Completeness is an estimate of the total volume of residential mortgage loan originations and the percentage of the total volume attributable to depository institutions subject to Federal or state disclosure reporting. Our goal in this phase of the study is to gain a complete picture of all residential lending activity and to determine the percentage reflected on Federal and state disclosure statements.

1.2 SCOPE

In Phase 1 of the present study, mortgage disclosure statements prepared by depository institutions subject to Federal[1] or state disclosure regulations in the three Standard Metropolitan Statistical Areas (SMSAs) were collected and compiled. The results from this compilation show the volume of residential mortgage loans originated or purchased in fiscal year 1977 by depository institutions subject to mortgage disclosure reporting in Chicago, San Diego, and Buffalo.[3]

Once aggregated, however, these mortgage disclosure statements portray an incomplete picture of total mortgage lending because lenders not subject to reporting requirements are not included in the compilation. The completeness analysis completes the total lending picture by providing a quantitative estimate of the relative shares of mortgage lending by depository institutions subject to disclosure reporting requirements and by other types of lenders not subject to disclosure reporting.

These other types of lenders not subject to reporting requirements include:

- Savings and loan associations not subject to disclosure reporting because they claim assets less than $10 million, or have no office within the SMSA
- Banks not subject to disclosure reporting because they claim assets less than $10 million or have no office within the SMSA
- Mortgage companies
- Miscellaneous companies (e.g., insurance companies)
- Private parties (e.g., seller-financed).

To accomplish the completeness analysis, data on the mortgage lending activity of these other types of lenders had to be found, validated, and analyzed. The following steps were involved:

- Identification of the alternative sources of mortgage loan data for each of the three counties
- Evaluation of the alternative sources for selection of the most appropriate source in each SMSA
- Acquisition of data for each SMSA
- Validation and processing of the data to obtain estimates of the relative fraction of lending by each type of lender
- Analysis of the findings.

Locating and evaluating data indicating the complete residential mortgage activity of all lenders in a specified county was a pioneering effort. In fact, to the knowledge of the study participants, no such effort had ever before been undertaken. Thus, investigative activities associated with the acquisition and validation of complete lending data were a heuristic process through which considerable experience and knowledge were derived. Understanding the process associated with this phase of the study is nearly as important as the results, because these investigations offered insights into methods and problems associated with gathering and compiling mortgage lending data. The investigations emphasized the need for possessing a clear understanding of the terminology and criteria used to form and code data before making any attempt to acquire and use it in the analysis of mortgage lending patterns. Our analysis revealed shortcomings and problems associated with the current criteria for inclusion of mortgage loan data in disclosure statements These investigative activities and findings have been described at length in this report because they provide a basis for improving the selection criteria for data in disclosure statements as well as a firmer basis for future research of this nature.

An investigation of improper or discriminatory lending practices was not within the scope of this study and no findings or conclusions along this line are made or implied in this report. The data provided to JRB were supplied with the understanding that they would be used only within the framework of this study of completeness. It was agreed that this understanding would be respected by the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation.

1.3 METHODOLOGY

1.3.1 Analysis at the County-wide Level

The initial work plan for this study, dated November 18, 1977,[4] called for a completeness analysis at two levels county-wide and neighborhood. The county-wide analysis had as its goal to estimate the number of loans and the amount of loans originated by the various types of lenders throughout the county as a whole. The neighborhood analysis was limited to study of 10 to 15 census tracts representative of 4 or 5 selected neighborhoods in each county.

During the course of the study, the objective and associated methodology was modified to eliminate the neighborhood level analysis and to substitute instead a more extensive validation, analysis, and interpretation of the county-wide mortgage loan activity. This decision was based on two considerations. First, a study of only four or five selected neighborhoods in an SMSA or county was too limited in scope to allow a valid interpretation of mortgage lending patterns. Second, the resources required to geocode loans to census tracts for additional neighborhoods and to obtain updated sociodemographic information for neighborhoods and tracts were beyond the scope of the resources available for this study.

1.3.2 Analysis of the Major County in the SMSA

The primary information source for complete data on mortgage lending in a given area was found to be either the county recorder's and assesor's office, or private title companies. Limitations in the nature of this data led to a second restriction on the scope of the study.

In a few counties, commercial firms gather data from county recorder's and assessor's offices, process it into hardcopy or microfiche reports, and sell it to real estate agents and other interested parties. Not surprisingly, the methods used by commercial firms vary widely, resulting in data of differing usefulness to this study. Most users, for example, are less interested in the amount of the mortgage or the name of the lender, than they are in the sale price and location of the property. And in cases where lenders are identified, the name of the lender is often not spelled consistently or coded to allow sorting or aggregation. Finally, whether derived from county offices or title company files, such data are typically available from title companies or commercial firms only under the following limited circumstances: 1) on a county-by-county basis; 2) for deeds, trust deeds, or mortgages involving title transfers, and; 3) on the basis of individual transactions (e.g., deeds, mortgage loans). The need to obtain data on a county-by-county basis and the large number of loans originated in 1977 in each SMSA (e.g., more than 130,000 mortgage loans in the Chicago SMSA alone) resulted in the decision to restrict the data collection and analysis to only the major county in each SMSA. Consequently, the completeness analysis that follows is based upon an analysis of mortgage lending in Cook, San Diego, and Erie counties and not the total lending for the entire SMSAs.

1.3.3 Criteria for Data Use

Inherent limitations in the mortgage data derived from the files of a title company or a county recorder's office presented problems in the selection of specific types of mortgage loans. Several types of mortgage transactions required on mortgage disclosure statements, for example, are not recorded by title companies or county offices. These types include: home improvement loans, refinanced loans, assumed loans, and loans purchased by depository institutions. Conversely, mortgage data derived from the files of a title company or a county recorders office often include transactions not required on mortgage disclosure statements. Second mortgages and trusts and mortgage loans for unimproved properties are two such examples.

In spite of these difficulties, our goal was to locate and obtain data that would provide the closest possible match with the criteria of Regulation C. Knowing the difficulties associated with obtaining data meeting all of the provisions of Regulation C, three minimum essential criteria were established. These criteria required each source to include:

1. All mortgage loan originations in the entire county
2. All mortgage loan originations for the entire calendar year 1977
3. Information enabling a determination of the number and volume of mortgage loans originated by each specific lender-type in the county.

In addition, data were sought in machine readable form, and where the data fields for each loan record would enable a differentiation of the following:

1. Type of loan (e.g., VA, Conventional, etc.)
2. Type of dwelling or property (e.g., residential single family, unimproved land, etc.)
3. Property location by county subregion (e.g., census tract, assessor's parcel number, etc.)

4. Purpose of loan (e.g., property purchase, construction, refinance, etc.)

5. Lender type (bank, S&L, Mortgage banker, etc.).

Data meeting the three essential criteria were obtained for all three counties. However, data meeting a significant portion of the optional criteria were only available for San Diego County. Consequently, a detailed analysis differentiating various loan and property characteristics was performed for San Diego County but not the other two counties.

1.3.4 Obtaining Data

The initial work plan for this study listed five primary sources of data to be used in the completeness study. These were:

1. Mortgage disclosure statements compiled for each of the three SMSAs by the Phase 1 contractor

2. Mortgage disclosure statements for Cook County, Illinois, filed with the Illinois Department of Financial Institutions by banks, savings and loan associations, insurance companies, and mortgage bankers

3. Mortgage data for Cook County, Illinois, obtained from Real Estate Data, Inc.

4. Mortgage data for Erie County, New York, obtained from Teela Market Savings

5. Mortgage data for San Diego County, California, obtained from Real Estate Data, Inc.

During the course of the study several events transpired, making it necessary to obtain information from sources other than four of the five originally designated. Only the Phase 1 contractor remained as a primary data source, and the mortgage disclosure statements compiled by the Phase 1 contractor were provided to JRB in March 1979 for use in the study.[3]

Cook County: The original plan to obtain and use the mortgage disclosure statements from the Illinois Department of Financial Institutions was changed when the Supreme Court of the State of Illinois declared Illinois Public Act 79-632: "Financial Institutions Disclosure Act" unconstitutional. This ruling resulted in a cessation of disclosure reporting by some of the organizations under the jurisdiction of the State of Illinoie during the second half of 1977. This eliminated the Illinois Department of Financial Institutions as an available source of completeness information. Nevertheless, the department did provide disclosure statements for state-chartered depository institutions for use in Phase 1 of the study.

In the early stages of the study, the Chicago Title and Trust Company (Chicago Title) replaced Real Estate Data, Inc. (REDI) as the source of data for Cook County, Illinois. Prior to October 1977, REDI received its data from Chicago Title. Beginning in October 1977, REDI began obtaining its data from an alternative source, which did not provide complete information on all mortgage loans. Consequently, REDI's data for the last three months of 1977 were unsuitable for use in the study. Since REDI could supply the required data for Cook County only for the first nine months of calendar year 1977, an investigation of sources of supplementary data was undertaken. Following a intricate series of discussions and negotiations, Chicago Title agreed to provide JRB with the data for Cook County, Illinois. Importantly, Chicago Title agreed to provide only computer reports or listings and not information in machine readable form. On June 30, 1978, Chicago Title delivered a computer listing of calendar year 1977 loans for properties in Cook County. The listing, displaying the number of loans and the amount of loans made in calendar year 1977 by each lender was the major source of data for the completeness analysis in Cook County.

Erie County: The Buffalo Daily Law Journal[5] replaced Teela Market Survey as the source of data for Erie County, New York during the early stages of the study. This change was necessary because Teela Market Survey's records were associated with property deeds, and these records did not identify the mortgagee (i.e., lender). As a result, retention of Teela as a data source would have required a complicated search procedure using the mortgage and the deed indexes in the County Recorder's office to determine which property sales were accompanied by mortgages and identifying the lender and the amount of the mortgage. Discussions with Monroe Abstracts Buffalo, New York; Legal Recording and Research Bureau, Ltd. Buffalo, New York; and an inspection of the Erie County deed and mortgage libers led to the conclusion that the *Buffalo Daily Law Journal* was the best source of mortgage information for Erie County. The *Buffalo Daily Law Journal* provides information on each mortgage loan made in the City of Buffalo as well as the rest of Erie County. In July 1978, JRB received issues of the *Journal* covering the period January 1, 1977 to January 15, 1978. The mortgage information extracted from these journals was the major source of data for the completeness analysis for Erie County.

San Diego County: During the course of the study, Nationwide Real Estate Registry replaced Real Estate Data, Inc. (REDI) as the source of data for the San Diego County, California completeness analysis. At that time, the San Diego County data was prepared for REDI by a companion firm REP INDEX, located in Los Angeles. A visit to this firm revealed that the REP INDEX/REDI data for San Diego County did not include the lending institution (i.e., mortgagee). Further investigation uncovered a method for combining a tape of the REP INDEX data with a tape from the San Diego County Recorder's Office. Because of the complexities associated with this process, however, the investigation of alternative data sources continued. Discussions were held with representatives from the San Diego County Recorder's Office and the following four commercial firms to identify the best source of data:

1. Micro Fiche Publisher, Inc., Napa, California
2. E. W. Systems, Los Angeles, California
3. Southwest Business Reports, San Diego, California
4. Nationwide Real Estate Register, Chula Vista, California.

Micro Fiche Publishers was eliminated because of their unwillingness to provide a tape of their transactions. Southwest Business Reports was eliminated because their data were only available in microfiche form and not in machine readable form. H. W Systems appeared a potential source of data, but they were slow in responding to our requests Nationwide Real Estate Register was selected because their data met all of the essential criteria, met many of the additional optional criteria, was of high quality, was reasonably priced, and was immediately available in machine readable form. A tape containing the 1977 mortgage transactions for San Diego County, thus, was obtained from Nationwide in March 1978, and these data were the major data source for the completeness analysis in San Diego County.

National Data: The financial regulatory agencies, the Department of Housing and Urban Development, and other organizations gather information and publish reports indicating on a national basis estimates of the total amount of mortgage lending by various types of lenders. Data on national lending patterns were obtained and used in this study as a basis from which to interpret the lending patterns derived from analysis of the three counties in this study.* Variations between the lending patterns in the three selected counties and those reflected in the national averages as well as the causes for these variations are discussed in this report.

1.3.5 Data Validation, Processing, and Analysis

The wide variation in the form and content of the data obtained for the three counties necessitated development of three separate procedures for data entry, validation, processing, and analysis. Data entry and data coding procedures were needed for the Cook and Erie County data, and tape conversion procedures were necessary for the San Diego County data. Several levels of validation were performed on the data from each county to verify the completeness and accuracy of the original source and to maintain accuracy during the transition through data entry, conversion, and processing.

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*Several sources were used and these are cited throughout the report.

Perhaps the most difficult task involved gaining a clear understanding of the definitions and criteria used by the data suppliers in forming their data base and in coding the individual transactions. This task was made more difficult because of the differences in terminology used by various counties, title companies, commercial data suppliers, lending institutions, and organizations involved in real estate transactions. Indeed, before obtaining and interpreting data from title companies or commercial suppliers for use in the analysis of mortgage lending patterns, one must understand several sets of vocabularies. Some states and counties, for example, use the phrase "deed of trust" in place of a "mortgage." County offices use terms such as grantor, grantee, mortgagee, mortgagor--terms not found in Regulation C. Other terms used with these data include: first trust deed, second trust deed, grant deed, beneficiary, assumption, cash sale, seller financed, legal description, assessor's parcel number, and private buyers. Understanding the use of these terms in forming each particular data base was an important prerequisite to the analysis and interpretation of the data used in the completeness study. A detailed discussion of data validation, processing and analysis procedures for each county is presented in Chapters 3, 4, and 5.

The mortgage loan data for San Diego were used for a special comparative analysis of the mortgage lending information portrayed on disclosure statements versus the information derived from the county offices. This analysis was possible because detailed information on individual mortgage loans was available from both the State of California and from Nationwide. These data were used to perform a micro-level comparative analysis of the mortgage lending activity for a selected sample of depository institutions. The mortgage data from Nationwide were compared with mortgage data reflected in the disclosure statements prepared by the State of California for these institutions. This comparative analysis provided insights into the nature and source of the differences between mortgage lending information derived from county offices and information included in disclosure statements. It also provided insights into the ambiguities in the mortgage loan criteria in Regulation C and the differences between the perceived "intended" criteria in Regulation C and the "actual" criteria used in the preparation of disclosure statements. A detailed explanation of the methods used to make this comparison is presented in Chapter 3, and a discussion of the findings is presented in both Chapters 3 and 6.

1.4 [illegible] OF THIS REPORT

In the remainder of this report, we discuss the characteristics of the data obtained for each of the three counties, the steps taken to verify and validate the data, the analysis performed to estimate the patterns of mortgage lending, and the findings and conclusions drawn from the analysis. Chapter 2 presents a brief discussion of the national pattern of mortgage lending. This provides a framework for analysis of the lending patterns within the three counties.

The completeness analysis of the lending patterns within San Diego, Erie, and Cook counties are presented in Chapters 3, 4, and 5. A comparison of the lending patterns in the three counties, the lessons learned in data collection and analysis, and the overall findings and conclusions of the completeness analysis are summarized in Chapter 6. Detailed reports generated from our computerized analysis in each county are included in Appendices A, B, and C, and the file specifications are presented in Appendices D, E, and F.

As the following chapters indicate, the completeness analysis was difficult and complex and accomplishing it required solving a variety of problems. We hope the detailed discussions of these problems and solutions in the chapters that follow will prove useful to the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation in reporting to the Congress on the Home Mortgage Disclosure Act. Additionally, we hope they will provide a primer for important insights useful to future researchers.

CHAPTER 2

LENDERS AND THE NATIONAL LENDING PATTERN

This chapter presents a brief discussion of the national pattern of mortgage lending and a summary of the lending practices of five categories of mortgage lenders. This discussion establishes a national context for the county-level completeness analysis that follows. Because the completeness study compares the percent and volume of mortgage lending activity by institutions subject to disclosure reporting against that of other types of lenders, understanding the characteristics of these is a necessary prerequisite to the analysis. Indeed, by examining how lending patterns in the three counties relate to the national patterns, it is possible to understand the reasons for the differences among the counties.

The completeness analysis presented in this report focuses on five categories of lenders involved in significant mortgage activity. Of these categories, four are comprised of institutions that dominate, in terms of volume and percentage, mortgage lending activity. These are:

- Savings and Loan Associations
- Mutual Savings Bank
- Commercial Banks
- Mortgage Companies

The fifth category, created by default from all sources of funding not included in the above groupings, has been titled "Miscellaneous Lenders." This chapter will discuss these five types of mortgage lenders.

2.1 THE NATIONAL LENDING PATTERN

There are two primary measures of participation in the mortgage market: share of originations, and share of debt held. The percentage of originations represents lending activity over a specific period of time and is the direct result of an institution's credit-granting decisions and short-run policy. The share of debt held is a measure of an institution's mortgage investment at a single point in time and is more likely to be a reflection of that institution's long-run policy.

Table 2.1 shows originations and share of debt held by the five categories of lenders.[6] As the table indicates, about 95 percent of all residential mortgages were originated by commercial banks, savings and loan associations, mutual savings banks, and mortgage companies in 1977. The three depository-type institutions--commercial banks, savings and loan associations, and mutual savings banks--held about 69 percent of all residential mortgage debt.

2.2 ACTIVITY BY INDIVIDUAL LENDER-TYPES

The role of each lender-type in the national picture can be understood by asking three questions of each: What is its primary mission?; What share do residential mortgage loans comprise in its total portfolio, and what percentage of national mortgage lending does this represent? What are its primary or unique characteristics? The sections that follow will seek to answer these questions for each of the five categories of residential mortgage lenders.[7]

2.2.1 Savings and Loan Associations

Savings and loan associations are depository institutions occupying a unique role in the nation's economy. Unlike other private financial institutions, a savings and loan association is ordinarily mandated to accumulate savings from individuals which are used to finance home ownership. Some of the larger institutions participate significantly in the secondary market and virtually all provide some non-housing consumer credit, nevertheless, the majority of activity by S&Ls is in lending money to home owners and home buyers.

Not surprisingly, in light of this mission, the 5,000 plus savings and loan associations lead the residential mortgage industry both in the volume of mortgages originated and the total amount of debt held.

TABLE 2.1: MAJOR PARTICIPANTS IN THE 1977 RESIDENTIAL MORTGAGE MARKET *

Lender Type	Originations**		Debt Held***	
	$Millions	%	$Millions	%
Commercial Banks	38,202	22.1	114,330	15
Mutual Savings Banks	10,293	5.9	72,941	9
Savings and Loan Associations	93,141	53.8	343,246	45
Mortgage Companies	23,295	13.5	--	--
Miscellaneous Lenders	8,081	4.7	203,917	31
TOTAL	173,012	100	767,978	100

NOTES

* Data not available included in miscellaneous lenders
** Source - Department of Housing and Urban Development, " HUD News," June 1978
*** Source - Federal Reserve Bulletin

portion derived from demand accounts, long term lending is unattractive. As a result, commercial banks are drawn to construction and other shorter term loans which offer a closer match between their maturity of assets (loans) and liabilities (assets).

2.2.3 Mutual Savings Banks

The primary role of the mutual savings bank is to act as an intermediary between individual savers and home buyers. A thrift institution, the mutual savings bank shares characteristics of both savings and loan associations and commercial banks.

While generally insured by the Federal Deposit Insurance Corporation, mutual savings banks are classified with savings and loan associations for regulatory purposes, such as Regulation Q. Like savings and loan associations, mutual savings banks have certain tax incentives to make real estated-related loans. All mutual savings banks are state chartered at this time, and most are located in the Northeast and Mid-Atlantic states.

In 1977, mutual savings banks originated about $10 billion of mortgage funds, or 5.9 percent of the national total This is the smallest overall share among the major lending types in 1977 but they are third in debt held, with $73 billion or 9 percent of the national total In the 17 states* which have mutual savings banks, however, they are more significant competitors in mortgage market than these national figures indicate. In these states, they hold 36 percent of the debt held by depository institutions, and their ratio of mortgage loans to total assets is 65 percent.

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*New York, Massachusetts, Connecticut, Pennsylvania, New Jersey, Washington, New Hampshire, Maine, Rhode Island, Maryland, Vermont, Indiana, Wisconsin, Oregon, Minnesota, Alaska, Delaware.

2.2.4 Mortgage Companies

Mortgage companies serve as financial intermediaries between borrowers and lenders. Of the 1,000 mortgage companies in the U.S. the vast majority are located in the south and west. Mortgage companies generally do not hold mortgage loans; instead, all mortgage loans they originate are sold either directly or through the secondary market to mortgage investors.

Mortgage companies originated 23 billion, or about 13.5 percent, of all residential mortgages Most activity is in FHA-VA loans, where mortgage companies made 75 percent of all such loans. Because of their uniform quality, FHA/VA loans represent a know quantity to investors and are, therefore easier to assemble into packets and sell to long-term investors through the secondary market.

2.2.5 Miscellaneous Lenders

The final group of lenders is composed of life insurance companies, government agencies, pension and retirement funds, credit unions, real estate investment trusts, private individuals and firms.

Taken together, these lenders originated 8 billion, or 4.7 percent, of all residential mortgages in 1977. The group holds 234 billion, or 31 percent, of all residential debt.

Most of the originations in the group are by private parties and sellers facilitating sales by making funds available for a short term Over half the debt is held by government and related agencies such as Government National Mortgage Association Farmers Home Administration, Federal Home Loan Mortgage Corporation, and the Federal National Mortgage Association These agencies and corporations provide funds for mortgage lending by buying large packets of loans--mostly FHA/VA, but some conventional--from originators and investors, thereby enabling these lenders to continue to originate mortgages. These agencies engage only in the secondary market and do not fall, therefore, directly within the scope of this report.

Life insurance companies hold $33.5 billion, or 4 percent of all residential mortgage debt, most of which is acquired through intermediaries such as mortgage companies. Still, life insurance companies invest primarily in commercial mortgages, which account for more than 56 percent of their mortgage portfolio. In total, they hold more than 28 percent of the national commercial mortgage debt.

Pension and retirement funds have only recently begun to invest in mortgages, particularly mortgage-backed government securities. Credit unions are slowly moving into mortgage lending. Real estate investment trusts hold about 2 percent of all mortgage debt but are rarely involved in originations.

2.3 SUMMARY

In the chapters that follow, the lending patterns in three selected counties--San Diego County, California; Cook County, Chicago; and Erie County, New York, are presented and discussed. Each of these analyses focuses on mortgage lending at a specific location and time. This comparative analysis of lending nationally and in three counties offers a way of understanding regional differences in lending patterns.

CHAPTER 3

SAN DIEGO COUNTY

This chapter presents the results of the completeness analysis for San Diego County, California. The presentation is in four sections. The first section discusses the data utilized for the completeness analysis in San Diego County. In Section 3.2 JRB's procedures for data validation and processing are presented. For the San Diego data, an in-depth comparison was made of the mortgage data derived from the county recorder's office against the mortgage data derived from disclosure statements. The purpose of this analysis was t provide insights into the differences between the two sources of data. This analysis was possible because the San Diego data included detailed information on lender, borrower, property, and loan characteristics and because micro-level (i.e. loan-by-loan) data were available for S&Ls in machine readable form from the State of California. Section 3. presents the results of the completeness analysis. The final section provides a summary of the observations derived from the analysis.

3.1 THE SAN DIEGO DATA

The analysis presented in this chapter is based upon data provided to JRB by Nationwide Real Estate Register, Chula Vista, California. Provided in the form of a magnetic tape, the data comprise 94,426 records--one for each real estate transaction recorded in the San Diego County offices in 1977. Although validation and selection criteria were applied to the data in an attempt to identify and select mortgage loans with lender, borrower, property and loan characteristics comparable to those specified in Regulation C, an exact correlation was not possible. The Nationwide data do not, for example, contain information on home improvement loans, refinanced loans, or other loan transactions not recorded at the county offices. Although each record in the Nationwide data contained 25 data elements, these were not sufficient to provide an exact match with the mortgage loan criteria of

Regulation C. Accordingly, the criteria used to include and exclude mortgage loans in the data base from which the completeness analysis was performed have been carefully defined in this chapter. Given these criteria, the data provide a suitable basis for estimating the relative volume and percentage of mortgage loans originated by various lenders in San Diego County.

Nationwide Real Estate Register compiles real estate data for nine West Coast counties. Figure 3-1 shows the process used by Nationwide to obtain and compile their data. Data on microfiche are obtained daily from the San Diego County Recorder's Office. These data are keyed onto floppy disks by means of a microcomputer data entry station. The data on the floppy disks are then transferred onto a computer tape. Each month, the data on the tape are merged onto a master disk file. Biannually, data from the San Diego County Assessor's Office and the County Planning Department are collected and merged onto the disk file. A formatted tape is produced from the master disk file.* Nationwide sends the formatted tape to an outside computer vendor who produces a master microfiche roll. Nationwide makes copies of the microfiche and distributes them to clients in a variety of microfiche output formats.

Each record on the tape purchased by JRB contained the 25 data elements shown in Table 3-1 (Technical specifications for the record fields are included in Appendix D.). Aspects of the Nationwide data pertinent to this study include:

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*JRB purchased the formatted tape containing the San Diego data.

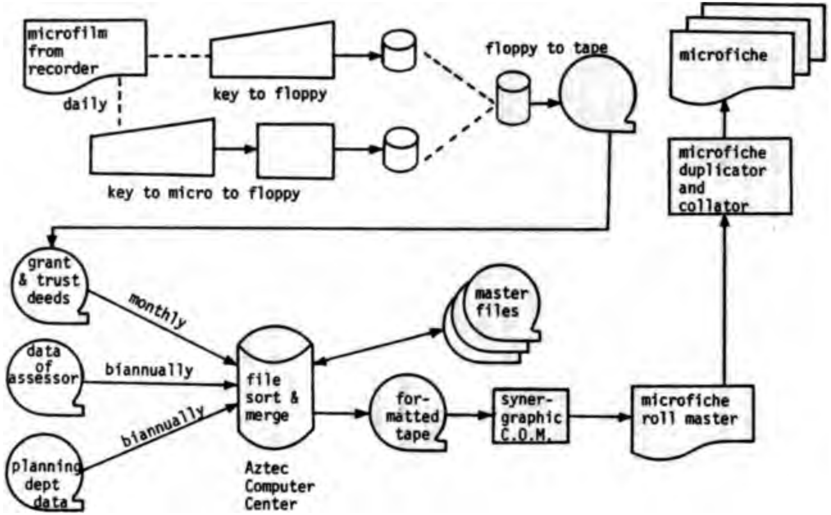


FIGURE 3-1: NATIONWIDE REAL ESTATE REGISTER PROCESS

DATA ELEMENT DEFINITIONS

PARCEL NUMBER	-	Assessor's Parcel Number
EXEMPTION CODE	-	Nature of tax exemption for prior owner: H-Homeowner B-Business Inventory V-Veteran. W-Welfare R-Church O-Orphanage C-Cemetery S-SSCRA E-College M-Miscellaneous
TAX RATE AREA	-	Incorporated city or unincorporated school district in which property is located
ADDRESS OR LEGAL DESCRIPTION	-	Address of subject property. If no address, subdivision, lot and block identification given. For property not subdivided, township, range and section are given
BUYER	-	The name of the buyer and the number of parties involved. Private parties are identified by the first four letters, commercial buyers by their first three.
MAP	-	Subdivision map number
DOCUMENT TYPE	-	Coded nature of transfer: C-Regular Owner Change D-Death Certificate Q-Quit Claim X-Unresearched R-Recorded Contract O-Other U-Unrecorded Contract
DOCUMENT NUMBER	-	Number on the grant deed which transferred the ownership of the property
MONTH	-	Month deed was recorded. January through September encoded as 1-9. October, November, and December as O, N, and D
YEAR	-	Year deed was recorded. In this file always '77'
ZONING	-	Property's zoning category
NUMBER OF UNITS	-	Number of living units
AREA	-	Acreage if more than one acre, otherwise square footage

TABLE 3-1

IMPROVEMENTS - Assessor's value on improvements (e.g., pool, fence, etc.)

FULL VALUE - Assessor's value on the real estate (land and building)

PERSONAL PROPERTY CODE - A 'P' indicates that there is personal property.

TITLE COMPANY - Code identifying title company issuing the title policy. See Table D-II.

FIRST TD AMOUNT - The amount represented by the first concurring trust deed following the grant deed. It is not necessarily a first trust deed. The first trust deed may have been assumed, and will not appear anywhere in the public records connected with the transfer of the subject property.

LENDER TYPE - Code identifying lender category:

1-Bank
2-Escrow
3-Mortgage
4-Savings&Loan
5-State Cal Vet
6-Title
7-Miscellaneous Co.
8-Private Party
9-Seller

LENDER ID - Code identifying individual bank (See Table D-III) or savings and loan (See Table D-IV)

SECOND TD AMOUNT - Amount of the second concurring trust deed and all other trust deeds following the first concurring trust deed

TRANSFER AMOUNT - Transfer value according to the value represented by the county documentary stamps. The transfer tax only represents the cash payment and new trust deeds. If there is an assumption, this field will not have the full value.

LOAN TYPE - Coded indentification of loan category:

C-Conventional
F-FHA
V-VA
G-GI
S-State Cal Vet

FULL NOT-FULL INDICATOR - 'F' indicates transfer tax value represents full purchase price. 'N' indicates transfer tax value is not full purchase price.

PORTION MULTIPLE CODE - Code indicating actual number of parcels on the grant deed.

TABLE 3-1 (Continued)

- The data were coded by 9 catagories of lenders (e.g., bank, savings and loan association, mortgage banker, etc.). Individual banks and savings and loans were identified by a separate code but individual lenders were not identified within the other categories of lenders.

- When applicable, the amounts of first and second trust deeds are included in the record. The amount shown under the "first trust deed" is the amount shown on the first concurring trust deed recorded after the grant deed. Should the original first trust deed be assumed, it will not appear in the county records associated with the property transaction. In such cases, the next trust deed recorded will be listed in the record as a first trust deed. Only then are subsequent transactions included in the record as "second trust deeds." Because Regulation C specifies that only loans secured by a first lien on residential real property are to be included in disclosure statements this inability to distinguish first deeds and second trust deeds is important.

- The assessor's value on improvements that have been made to the property is included in the Nationwide record. When this value is zero, the property is either unimproved or the owner is performing initial improvements that have not yet been assessed. Regulation C, however, specifies that only loans secured by improved real property should be included in disclosure statements.

- Each record contains a code letter indicating whether the transfer tax value was equal to the full purchase price. An "F" indicates that the transfer tax value represents the full purchase price, while an "N" indicates that it does not equal the full purchase price. This code is useful for identifying transactions that include an assumption. The transfer tax is based upon cash payments and new trust deeds. In the case of an assumption, the transfer value will not equal the full sample of the data. The purposes of the initial verification were to ensure that the contents of the records for each transaction were understood, and that the data were sufficiently complete and accurate for use in the study. To accomplish this the records were reviewed at length with personnel from Nationwide, and a sample of the records from the tape were verified against the microfiche source obtained from the county. This initial verification demonstrated that the quality and completeness of the data were suitable for the study. Consequently, the tape was purchased from Nationwide.

The DEC-10 computer of the Federal Home Loan Bank Board was used to edit, validate and process the data, using computer programs written by JRB. These programs set up the data base, edited each record, selected records according to specified criteria, and produced a variety of editing and output reports.

3.2.1 Editing the Data Base

To identify the number of records with specified criteria of interest, an iterative series of computer edits was performed on each of the 92,426 records The criteria used to reject inappropriate records are shown on Table 3.2, and the results of the final edit are shown in Table 3.3. As shown in Table 3.3, 58,903 records were selected for the analysis and 33,523 records were rejected.

Because of the problems in the data base outlined above, the loans included in the selected records can only be considered a "best fit" approximation of those included in disclosure statements Some of the selection criteria were adopted on the basis of our best judgment after careful consideration of alternatives. The 382 records with first trust deed amounts greater than $250,000 offer a good example.

A first analysis indicated that the total amount of these first trust deeds was $993,258,000. These included 56 records with first trust deed

REJECTION CRITERIA

1. Duplicate document number
2. Duplicate assessor's parcel number and buyer
3. No lender indicated
4. No first trust deed amount indicated
5. Construction loan (assumed to be temporary financing)
6. First trust deed greater than $400,000 and number of units = blank or 1) (probable commercial loan)
7. First trust deed greater than $400,000 and the ratio: first trust deed amount/the full real estate value is greater than 10 (probable keypunch error)
8. Seller financed and first trust deed amount and transfer tax value indicator = N (assumption with second trust deed in first trust deed field)
9. No first trust deed and transfer tax value indicator = N (assumption)

TABLE 3.2: REJECTION CRITERIA FOR SAN DIEGO DATA

RECORDS READ	92,426
RECORDS ACCEPTED	58,903
RECORDS REJECTED	33,523
ORIGINALS WITH DUPLICATES	4,080
DUPLICATES REJECTED	10,228
CONSTRUCTION LOANS	1,549
AMOUNT FIELD ERRORS	2,470
FIRST TRUSTS	64,416
SECOND TRUSTS WITH ASSUMPTIONS	5,548
CASH SALES	12,960
ASSUMPTIONS	9,502

	W/LENDER	W/O LENDER
BOTH TD AMOUNTS ZERO	537	21,916
1ST TD AMOUNT NON-ZERO ONLY	63,933	26
2ND TD AMOUNT NON-ZERO ONLY	4	5
BOTH TD AMOUNTS NON-ZERO	6,004	1
COMMERCIAL PROPERTIES*	2,606	
INVALID CODED VALUES	78	

*Assumed on the basis of the first trust deed greater than $400,000 and the number of living units less than 2.

TABLE 3.3: RESULTS OF THE EDIT OF THE SAN DIEGO FILE

amounts greater than $1 million, and 184 records with first trust deeds greater than $400,000. These data illustrate how a very few large transactions can distort the lending patterns if they are not properly reported. In this case, the nearly $1 billion represented by these 382 records was one-third of the $3 billion total lending for the county. Keeping this fact in mind, the records for these 382 large trust deeds were analyzed to determine the most applicable criteria for acceptance or rejection.

Initially, the approach of establishing an arbitrary upper limit (e.g., $250,000 or $400,000) was considered. Under this scenario, all first trust deeds greater than the upper limit would be rejected. It was concluded, however, that this was unsatisfactory because it resulted in the rejection of first trust deeds for multi-family properties included on disclosure statements. In addition, San Diego County claims a significant number of homes valued in excess of $250,000. Consequently, the following set of selection criteria were established:

- Accept all records with first trust deeds less than $400,000 if these records meet all the other criteria.
- Reject the record if the first trust deed amount is greater than $400,000 and the number of living units is 1 or 0.
- Accept the record if the first trust deed amount is greater than $400,000 and the number of living units is greater than 1.
- Reject the record if the first trust deed is greater than $400,000 and the ratio of the first trust deed amount to the full value amount of the property is greater than 10. (Probable keypunch error)
- Reject all construction loans.

These criteria result in the possible rejection of a few loans greater than $400,000 for single family residences, but they allow the larger multi-unit properties to be appropriately included. A total of 89 records totaling $79.5 million were rejected solely on this basis. More than 2,500 additional records fell in this category but were rejected for other reasons such as being a construction loan. The test of the ratio of the loan amount to the property value allowed rejection of large keypunch errors associated with the loan amount.

Construction loans were considered to be temporary financing and were rejected regardless of the amount of the loans.

The total number of rejected records, 33,523, is less than the sum of each category of errors shown on Table 3.3. This apparent inconsistency is the result of individual records failing under more than one of the edit criteria.

As shown in Table 3.3., there were 9,502 first trust deeds assumed in San Diego County, and an additional 5,548 assumptions involving either first or second trust deeds. Regulation C does not indicate how assumptions are to be treated. However, the intent of Regulation C is to report the remaining assumed balance on disclosure statements.[9] State-chartered savings and loan associations do not report assumptions to the State of California and the State does not include them in the disclosure statements they prepare for these institutions Assumptions are not recorded at the county offices; consequently the Nationwide data shows neither the lender nor the amount for these transactions. As a result, the Nationwide data were more consistent with the actual data on disclosure statements than with data that would be derived on the basis of the intent of Regulation C.

There were 12,960 cash sales made in 1977. Approximately 85 percent of the 33,523 record rejections were due to cash sales or assumptions. The remaining rejections were due to construction loans and blanks or errors in the record field for the first trust deed amount.

[9] See Chapter 6 for a further discussion of assumptions. Another source of confusion arises from the practice of permitting a buyer to "assume" the seller's trust deed, yet increase the interest rate.

3.2.2 Validation and Comparison Against Other Sources of Data

To refine our understanding of the San Diego data, a further analysis was conducted. Its purpose was to: 1) identify the difference between the mortgage information shown on the Federal or state disclosure statements and that shown on the Nationwide Directory, 2) determine the reasons for the differences and 3) validate the Nationwide data. This analysis was performed in two stages In the first stage we compared loan data obtained from three sources--Nationwide, State of California, and the loan roster from the accuracy audit for a single state-chartered savings and loan in San Diego. In the second stage, we compared the Nationwide data for 34 state-chartered institutions against similar data from the State of California.

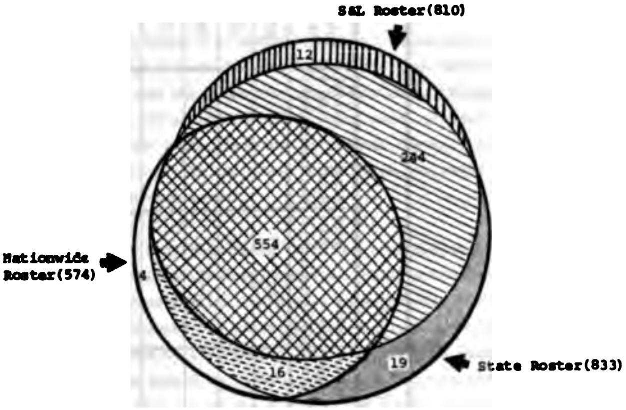
Comparison of Data from Three Sources (First Stage): Although some difficulty was encountered in making a precise match among the individual loans shown on the listing from Nationwide, the savings and loan association loan roster, and the State of California, the three-way comparison was ultimately successful. The comparison revealed significant differences among the three sources. These differences are shown diagrammatically in Figure 3.2.

The total number of loans for San Diego County indicated by each of the three sources were:

Nationwide Roster:	574
S&L Roster:	810
State Roster:	833

A total of 544 loans were found in common on all three rosters. Two hundred and forty-four loans were common to the state and the savings and loan rosters only. Sixteen loans were found to be common to State and Nationwide rosters only. Totals of loans found on only one roster were as follows: 19 loans on the State roster only, 12 loans on the savings and loan roster only, and 4 loans on the Nationwide roster only.

Table 3.4 shows how the 833 loans on the State roster were distributed between the savings and loan and Nationwide rosters. The four loans included



▩ 554 loans common to all three rosters

▧ 244 loans common to State & S&L rosters only
(233 of these are refinanced, construction, or home improvement loans)

▤ 16 loans common to State & Nationwide rosters only

▦ 19 loans on State roster only

▥ 12 loans on S&L roster only

☐ 4 loans on Nationwide roster only

FIGURE 3.2: COMPARISON OF THE NUMBER OF LOANS ON THREE ROSTERS

only on the Nationwide roster and the 12 loans included only on the savings and loan roster are not shown in the table.

As indicated in Table 3.4, refinanced loans, construction loans and home improvement loans account for the major difference between the information from Nationwide and the other two sources of data These three types of loans account for 233 of the 244 loans which were included on the savings and loan roster but not included on the Nationwide roster In addition, they account for all but 17 of the 263 loans included on the state roster but not included on the Nationwide roster.

We already knew that refinanced loans and home improvement loans were not included in the Nationwide data, but this analysis indicated the number of loans involved. Construction loans were intentionally excluded from the Nationwide data we selected for analysis. Regulation C does not indicate whether the full amount of a refinanced loan, or only the increased amount of the principal balance should be included in the disclosure statements. In practice, most institutions and the State of California appear to include the full amount of a refinanced loan Regulation C, however, indicates that to be included a loan must be made primarily to purchase, repair, rehabilitate or remodel residential real property. The data provided to the State of California are insufficient to permit application of this test.

Regulation C indicates that construction loans for residential real property should be included in the disclosure statement if they are not "temporary financing No definition, however, is given for temporary financing. Construction loans for one or two years are obviously temporary financing, and 20 to 30 year loans for "construction by owner" are obviously not temporary financing Depository institutions typically classified these as construction loans, but we found many to be confused about the proper reporting procedures.

The source of the remaining discrepancies were investigated by researching the trust and grant deeds at the County Recorder's Office. Eleven of the twelve

In summary, our analysis of the three sources of data indicated:

- The omission by Nationwide of eight legitimate transactions amounted to only 1.4 percent of the 554 correctly recorded transactions.
- The one serious keypunch error found (i.e., $450 vs. $50,450) equals 0.18 percent of the 544 correctly recorded transactions.
- The Nationwide inclusion of one inappropriate loan equals 0.18 percent of the 554 correctly recorded transactions.

Based on these findings, we concluded:

- The validation analysis indicates that the sum of all errors listed above equals 1.8 percent. This results in an accuracy rate of greater than 98 percent, an acceptable level.
- The major differences between the Nationwide data (or any data derived from county offices) and the data in mortgage disclosure statements result from refinanced loans, construction loans, home improvement loans, and assumed loans (if they are reported on disclosure statements).
- Allowing for the known differences between the Nationwide data and the data on disclosure statements, the Nationwide data provide an adequate basis for the completeness analysis of mortgage lending in San Diego County.

Comparison on Nationwide and State Data (Second Stage): In the second stage of our analysis, a computer program was written to process the state file. Its purpose was to classify and count the number of loans and the dollar amounts associated with the four codes shown in the above Table 3.4 (i.e., 03, 05, 02 and 09). This program was used to evaluate 34 state-chartered associations to determine the incidence of each of the four types of loans. Sixteen of the 34 institutions were subject to disclosure reporting in San Diego. The state data loans appearing on the savings and loan roster but not reflected on the Nationwide roster had trust deeds recorded without grant deeds. This meant a loan was made without a change in ownership of the subject property. These were presumed to be refinanced loans or construction (by owner) loans. Such loans would not be included on the Nationwide roster but should be included on the state roster. The remaining loan was just the reverse--a grant deed recorded without a trust deed.

The investigation also revealed that eight of the eleven transactions for purchase of property included on both the state and the savings and loan associations rosters but not reflected on the Nationwide roster were incorrectly omitted by Nationwide. Two of the remaining three transactions were recorded as trust deeds only. This presumably indicates either refinanced loans or construction loans. The remaining transaction was not recorded, except on the savings and loan association roster, from which we inferred that the name may have been misspelled on the savings and loan associations roster.

The 16 transactions for purchase of property included on the state and Nationwide roster but omitted from the savings and loan association roster were treated as valid transactions and assumed to be errors of omission on the savings and loan association roster.

Finally, the following discrepancies were found and considered to be keypunch errors:

Nationwide Roster	S&L Roster
$ 30,920	$ 39,920
450	50,450
39,900	35,950
44,500	44,800
43,000	43,600

In summary, our analysis of the three sources of data indicated:

- The omission by Nationwide of eight legitimate transactions amounted to only 1.4 percent of the 554 correctly recorded transactions.
- The one serious keypunch error found (i.e., $450 vs. $50,450) equals 0.18 percent of the 544 correctly recorded transactions.
- The Nationwide inclusion of one inappropriate loan equals 0.18 percent of the 554 correctly recorded transactions.

Based on these findings, we concluded:

- The validation analysis indicates that the sum of all errors listed above equals 1.8 percent. This results in an accuracy rate of greater than 98 percent, an acceptable level.
- The major differences between the Nationwide data (or any data derived from county offices) and the data in mortgage disclosure statements result from refinanced loans, construction loans, home improvement loans, and assumed loans (if they are reported on disclosure statements).
- Allowing for the known differences between the Nationwide data and the data on disclosure statements, the Nationwide data provide an adequate basis for the completeness analysis of mortgage lending in San Diego County.

Comparison on Nationwide and State Data (Second Stage): In the second stage of our analysis, a computer program was written to process the state file. Its purpose was to classify and count the number of loans and the dollar amounts associated with the four codes shown in the above Table 3.4 (i.e., 03, 05, 02 and 09). This program was used to evaluate 34 state-chartered associations to determine the incidence of each of the four types of loans. Sixteen of the 34 institutions were subject to disclosure reporting in San Diego. The state data indicated that the 34 institutions made loans totaling $871,122,000 of which $154,688,000 (17.7 percent) were for construction, refinancing, home improvement, or other non-property purchase loans not included in the Nationwide data. The state data indicated that the 16 associations in San Diego made the majority of the loans, and these totaled $846,154,000 of which $150,142,000 (1 percent) were for construction, refinancing, home improvement, or other non-property purchase loans not included in the Nationwide data. The Nationwide data indicated that these same institutions made loans totaling $671,892,000. Adding the 150,142,060 to the Nationwide total of 671,892,000 results in $822,034,000 which is 97 percent of the state total of $846,154,000. Thus, with the above adjustment, the difference between the Nationwide and state data for these 16 institutions is only 3 percent. This is an acceptable level.

3.3 COMPLETENESS ANALYSIS FOR SAN DIEGO

A summary of the volume and share of mortgage lending in 1977 for San Diego County, as determined from the Nationwide data, is shown in Table 3.5. The table reflects the volume of both conventional loans and government secured loans made by seven types of lenders Commercial banks and savings and loan associations are subdivided into two types of lenders: HMDA (those subject to disclosure reporting in San Diego) and Other (those not subject to disclosure reporting in San Diego). These four types of lenders combined with mortgage companies, miscellaneous companies and private parties made 58,903 loans for a total of $2,987,920,000 in 1977.

Fifteen reports showing the volume and percentage of lending by the various types of lenders for San Diego County are included in Appendix A. These detailed reports were prepared for five classes of lenders and each include three types of reports as follows:

TABLE 3.5: MORTGAGE LOAN ORIGINATIONS IN SAN DIEGO COUNTY DURING 1977

Lender-Type	Conventional Loans			Government Secured Loans [1]			All Loans		
	Amount[2]	Number	Percent[3]	Amount[2]	Number	Percent[3]	Amount[2]	Number	Percent[3]
COMMERCIAL BANKS (Total)	258,060	4,468	10.8	25,622	604	4.3	283,682	5,072	9.5
Commercial Banks (HMDA)	253,673	4,395	10.6	25,471	601	4.3	279.144	4,996	9.3
Commercial Banks (Other)	4,387	73	0.2	151	3	0.0	4,538	76	0.2
SAVINGS & LOANS (Total)	1,508,126	26,999	62.9	125,213	2,824	21.1	1,633,339	29,823	54.7
Savings & Loans (HMDA)	1,464,057	26,152	61.1	124,776	2,813	21.0	1,588,833	28,965	53.2
Savings & Loans (Other)	44,069	847	1.8	437	11	0.1	44,506	858	1.5
MORTGAGE COMPANIES	131,222	2,556	5.5	339,056	7,734	57.4	470,278	10,290	15.7
MISCELLANEOUS COMPANIES	120,858	2,692	5.0	99,001	2,173	16.7	219,156	4,865	7.4
PRIVATE PARTIES	378.483	8,791	15.8	2,280	62	0.4	380,763	8,853	12.7
TOTAL[4]	2,396,748	45,506	100.0	591,172	13,397	100.0	2,987,921	58,903	100.0

NOTES:

1. Includes FHA, VA, GI, and State of California Veterans Program
2. In thousands of dollars
3. Percentage of total amount of loan originations
4. Due to rounding, total amounts may not equal the sum of individual amounts

Classes of Lender (5)

- All lenders, by type
- HMDA banks, by name
- Other banks, by name
- HMDA S&L, by name
- Other S&L, by name

Type of Report (3)

- Number and amount of loans
- Percentage of number of loans
- Percentage of amount of loans

3.4 OBSERVATIONS

The following findings and observations are drawn from these data:

- A total of 58,903 mortgage loans with a total dollar value of $2,987,921,000 were originated in San Diego County in 1977.
- Depository institutions originated 64.2 percent of the 1977 residential loans in San Diego County, in contrast to a national average of 80 percent.
- Commercial banks made 5,072 loans in 1977 in the total dollar amount of $283,682,000. This accounted for 9.5 percent of the total of mortgage loan originations, which is less than 1/2 the national average for banks.
- Savings and loans made 29,823 loans in 1977 in the total dollar amount of $1,633,339,000. This accounted for 54.7 percent of the total mortgage loan originations, which is a level comparable to the national average.
- Mortgage companies were the dominant lender of government secured loans. Mortgage companies originated 57.4 percent of the government secured loans in 1977 but funded only 5.5 percent of the conventional loans in San Diego County during this period. The volume of lending by mortgage companies in San Diego was 20 percent higher than the national average.

- Miscellaneous companies (a combination of escrow companies, State Cal Vet, title companies and other miscellaneous companies) originated 7.4 percent of the total dollar amount of mortgage loans, which represented 16.7 percent of the government secured loans but only 5.0 percent of the conventional loans. Conversely, private parties originated 12.7 percent of the mortgage loans, but 8,791 of the 8,853 loans they originated were for conventional financing.
- More than 97 percent of the mortgage loans originated by depository institutions were made by institutions in San Diego which are subject to either Federal or state disclosure reporting. This indicates that the volume of lending by depository institutions not subject to disclosure reporting (i.e., those with assets under $10 million and those without offices in the San Diego SMSA) did not result in significant omissions in disclosure reporting.

A further discussion of the findings for San Diego County and a comparison with the findings of the other two counties is presented in Chapter 6.

CHAPTER 4

ERIE COUNTY

This chapter presents the results of the completeness analysis for Erie County, New York. This presentation is in four sections The first section contains a discussion of the data utilized for the completeness analysis. In section 4.2 data entry, validation, and processing is treated. Here, the manner through which raw data were converted to usable form is delineated. Section 4.3 presents the results of the completeness analysis for Erie County in terms of the volume and percentage of mortgage lending by eight types of lenders. The final section provides a summary of the observations derived from the analysis.

4.1 THE BUFFALO DATA

The analysis contained in this chapter is based upon data provided to JRB by the publisher of the Buffalo Daily Law Journal. The publisher Buffalo Daily Law Journal, Inc. provided JRB with the daily (except Saturday, Sundays and holidays) issues of the Journal covering the period January 1, 1977, to January 15, 1978 JRB developed data entry procedures and computer programs enabling the mortgage loan transactions listed in the Journal to be entered into an automated data base, validated, and processed. This provided a series of reports for the Erie County completeness analysis.

The Buffalo Daily Law Journal, a daily newspaper, is an official source of business and legal information for Erie County. Information related to deeds and mortgages in Erie County is obtained from the county offices on a daily basis and is listed in separate sections of the Journal. A time lag of three days to one week from the date a transaction is recorded to the date of its publication in the Journal can occur. A sample Journal entry of mortgage information (with fictitious borrowers) is shown in Figure 4.1. In each issue the listing of mortgage loans is divided into two categories: those secured by liens on properties within the City of Buffalo, and those secured by liens on properties in the rest of Erie County The mortgage loans secured by liens on properties in the rest of Erie County are further subdivided into approximately 48 localities (i.e., towns) within the county. Each transaction is identified according to the mortgagee (i.e., lender), amount of the loan, and the location.

Because the data contained in the Journal derive from the Erie County Recorder's Office, only those mortgage loans recorded at the county are included in the data. Consequently the data do not include home improvement loans or refinanced loans which are intended to be reported in disclosure statements. Furthermore, the data do not specify for each transaction the type of property, type of loan and purpose of the loan. These limitations inherent in the information contained in the Journal preclude selection of mortgage loans in strict accordance with the intended criteria of Regulation C. Accordingly, the criteria used to include and exclude mortgage loans in the data base from which the completeness analysis was performed have been carefully defined. Given these criteria, the data provide a suitable basis for estimating the relative volume and percentage of mortgage loans originated by the various lenders in Erie County.

4.2 DATA ENTRY, VALIDATION, AND PROCESSING

The issues of the Journal reporting lending activity in the period from January 6, 1977, to January 7, 1978, were selected to represent calendar year 1977 mortgage loans in Erie County. Because of the time lag in reporting loan transactions a six-day adjustment period was employed. This adjustment enabled the exclusion of loans that were originated during the last week of 1976 but that were listed in the Journal during the first week of 1977. It also enabled the inclusion of loans that were originated during the last week of 1977 but that were listed in the Journal during the first week of 1978. A total of 242 issues of the Journal were published during this period.

COUNTY MORTGAGES		
John & Ann Jones	1st Federal Savings & Loan Association of Rochester	56,200 Amherst
Joe & Mary Smith	Marine Midland Bank-Western	14,255 Cheektowaga
Patrick Miller	M & Trust Co.	40,700 Tonawanda

CITY MORTGAGES		
Albert Thomas	Buffalo Savings Bank	17,600 Porter Avenue
Donald & Susan Lee	John & Mary Russell	13,700 Drexel Road
Ralph & Grace Harris	Erie Co. Savings Bank	24,300 Niagara Street

FIGURE 4.1: SAMPLE OF MORTGAGE LOAN LISTED IN THE BUFFALO DAILY LAW JOURNAL

JRB developed data entry and validation procedures to extract, code validate the transactions from each issue of the Journal and enter the data into an automated data base on the DEC-10 computer of the Federal Home Loan Bank Board. Interactive data entry was performed using TECO, a DEC-10 supported text editing program. Computer programs for validation and reporting were written by JRB in COBOL and used for this task.

Before data entry was undertaken, coding and validation procedures were established to facilitate subsequent processing and analysis. The following six codes were defined:

1. HMDA Banks
2. Non-HMDA Banks
3. HMDA Savings and Loan Associations
4. Non-HMDA Savings and Loan Associations
5. Miscellaneous Companies
6. Private Parties

A unique three-character identification code was assigned to each commercial bank, mutual savings bank and savings and loan association. On the basis of this unique identification code, mutual savings banks were differentiated from commercial banks. Each bank and savings and loan association was assigned its appropriate HMDA or non-HMDA code depending upon whether it was (or was not) required to prepare a Federal or state disclosure statement for the Buffalo SMSA. A table of the codes is included in Appendix E. Each of the 48 localities in Erie County was assigned a unique three-character code to facilitate data entry and minimize file space. For example, Cheektowaga was assigned the code, CHK. A table of these codes is also included in Appendix E.

Using these code tables, the data entry, data validation, and file generation programs were established. Five data elements were extracted for each transaction in accordance with the definition shown in Table 4.1. Each mortgage transaction was configured as an individual record, and all records for each issue of the Journal were grouped into a unique file.

DATA ELEMENT	DEFINITION
Lender-Type	A one-digit code identifying the lender as one of the following: • A bank (commercial or mutual savings) required to report under the Act - i.e., "HMDA" bank • A bank (commercial or mutual savings) not required to report under the Act - i.e., "Other" bank • A savings and loan association required to report under the Act - i.e., "HMDA" S&L • A savings and loan association not required to report under the Act - i.e., "Other" S&L • A miscellaneous company - e.g., credit union, mortgage company, government agency • A private party including sellers or investors.
Lender-ID	A three-character code uniquely identifying the lender, when it is a depository institution
Loan-Amount	The amount of the loan, rounded to the nearest dollar. For loans under $10 million actual amount is presented. For loans of $10 million or larger amounts, the value $9,999,999 is used
Locality	A three-character code uniquely identifying the town in which the property is located
BDLJ-Issue-Date	The date of the Buffalo Daily Law Journal issue in which the mortgage listing appeared

TABLE 4.1: ERIE COUNTY DATA ELEMENT DEFINITIONS

The maximum size of each loan amount was restricted to $9,999,999 and loans exceeding this amount were entered as the maximum value. When all of the entries for each file (i.e., issue) were entered, the data were listed and manually verified against the original data from the Journal.

After all the applicable mortgage transactions for Erie County were translated into the 242 individual files, the files were merged into a unified data base and subjected to further validation as follows:

1. The unified data base was sorted by date
2. A verification report was generated to display the following data for each date:
    a. Total number of records
    b. Number of records with invalid or unidentified lender codes
    c. Number of records with invalid or unidentified locality codes
3. The data base totals for each date were validated against the totals for each individual file.
4. Invalid codes were corrected or the code table was updated, as appropriate.

These four steps were repeated until all errors or inconsistencies were resolved.

During the validation process, mortgage loan transactions with amounts less than $2,000 or greater than $100,000 were eliminated from the file and, thus, from the study. The mortgage loan transactions greater than $100,000 were eliminated because these transactions were, in all likelihood, for non-residential properties or purposes. The loans less than $2,000 were eliminated because they were, in all likelihood, for unimproved properties or for second mortgages and not for residential improved properties or first mortgages. A total of 436 mortgage loan transactions were eliminated by these two criteria. Of these, 425 were transactions with loans greater than $100,000 and 11 were transactions with loans less than $2,000. The average value of the 426 transactions excluded from the analysis was $1,088,098.

Although these transactions were not used in the analysis, they were retained in the file for subsequent use, if desired. After all validation procedures, a total of 18,021 mortgage loans with a total value of $426,218,000 were accepted and used as the basis for the completeness analysis.

4.3 COMPLETENESS ANALYSIS FOR ERIE COUNTY

A summary of the volume and percentage of mortgage lending by eight types of lenders in 1977 for Erie County as determined by the procedures outlined above is shown in Tables 4.2, 4.3, and 4.4. The data in the three tables correspond to three geographic areas: the whole of Erie County, the city limits of Buffalo, and the remainder of Erie County (outside of the Buffalo city limits).

Commercial banks, mutual savings banks, and savings and loan associations are subdivided into two types of lenders: HMDA (those subject to disclosure reporting in the Buffalo SMSA) and Other (those not subject to disclosure reporting in the Buffalo SMSA). Two columns are shown under each of the three geographic areas in Tables 4.2, 4.3 and 4.4. The first column shows the lending for all (i.e., "HMDA" and "Other") commercial banks, savings and loan associations, and mutual savings banks. The second column shows the difference between "HMDA" institutions and those classified as "Other."

Table 4.3 shows the amount of lending (in thousands of dollars) by each of the eight types of lenders. Mortgage loans totaling $79,011,000 were originated for properties within the City of Buffalo, and mortgage loans totaling $347,208,000 were originated for properties within the rest of Erie County.

Table 4.4 shows the percentage of the total amount of mortgage lending contributed by each of the eight types of lenders in Erie County, City of Buffalo, and the rest of Erie County.

TABLE 4.2: NUMBER OF MORTGAGE LOANS ORIGINATED IN ERIE COUNTY DURING 1977

Lender	Erie County		Buffalo		Rest of County	
COMMERCIAL BANKS (Total)	3,470	----	721	----	2,749	----
Commercial Banks (HMDA)	----	3,390	----	711	----	2,679
Commercial Banks (Other)	----	80	----	10	----	70
SAVINGS & LOAN ASSNS (Total)	3,094	----	452	----	2,642	----
S&L Associations (HMDA)	----	3,038	----	434	----	2,604
S&L Associations (Other)	----	56	----	18	----	38
MUTUAL SAVINGS BANKS (Total)	7,291	----	2,029	----	5,262	----
Mutual Savings Banks (HMDA)	----	7,284	----	2,027	----	5,257
Mutual Savings Banks (Other)	----	7	----	2	----	5
MISCELLANEOUS COMPANIES	2,051	2,051	886	886	1,165	1,165
PRIVATE PARTIES	2,115	2,115	877	877	1,238	1,238
TOTAL	18,021	18,021	4,965	4,965	13,056	13,056
PERCENTAGE OF COUNTY TOTAL	100%	100%	27.6%	27.6%	72.4%	72.4%

TABLE 4.3: MORTGAGE LOAN ORIGINATIONS IN ERIE COUNTY DURING 1977
(Thousands of Dollars)

Lender	Erie County		Buffalo		Rest of County	
COMMERCIAL BANKS (Total)	84,914	----	12,503	----	72,410	----
Commercial Banks (HMDA)	----	82,490	----	12,309	----	70,180
Commercial Banks (Other)	----	2,424	----	194	----	2,230
SAVINGS & LOAN ASSNS (Total)	85,834	----	8,420	----	77,514	----
S&L Associations (HMDA)	----	84,709	----	8,147	----	76,562
S&L Associations (Other)	----	1,125	----	273	----	852
MUTUAL SAVINGS BANKS (Total)	180,953	----	35,209	----	145,744	----
Mutual Savings Banks (HMDA)	----	180,799	----	35,180	----	145,619
Mutual Savings Banks(Other)	----	154	----	29	----	125
MISCELLANEOUS COMPANIES	40,094	40,094	13,405	13,405	26,689	26,689
PRIVATE PARTIES	34,424	34,424	9,475	9,475	24,949	24,949
TOTAL	426,218	426,218	79,011	79,011	347,208	347,208
Percentage of County Total	100%	100%	18.5%	18.5%	81.5%	81.5%

TABLE 4.4: PERCENTAGE OF THE DOLLAR AMOUNT OF MORTGAGE LENDING IN ERIE COUNTY DURING 1977

Lender	Erie County		Buffalo		Rest of County	
COMMERCIAL BANKS (Total)	19.9	----	15.8	----	21.0	----
Commercial Banks (HMDA)	----	19.3	----	15.5	----	20.3
Commercial Banks (Other)	----	0.6	----	0.3	----	0.7
SAVINGS & LOAN ASSNS (Total)	20.1	----	10.6	----	22.3	----
S&L Associations (HMDA)	----	19.9	----	10.3	----	22.1
S&L Associations (Other)	----	0.2	----	0.3	----	0.2
MUTUAL SAVINGS BANKS (Total)	42.5	----	44.6	----	41.9	----
Mutual Savings Banks (HMDA)	----	42.5	----	44.6	----	41.9
Mutual Savings Banks (Other)	----	----	----	----	----	----
MISCELLANEOUS COMPANIES	9.4	9.4	17.0	17.0	7.7	7.7
PRIVATE PARTIES	8.1	8.1	12.0	12.0	7.2	7.2

CHAPTER 5

COOK COUNTY

This chapter presents the results of the completeness analysis for Cook County, Illinois. This presentation is in four sections. The first section contains a discussion of the data utilized for the completeness analysis. In section 5.2, JRB's procedures for data entry, validation, and processing are discussed. Section 5.3 presents the results of the completeness analysis for Cook County in terms of the volume and percentage of mortgage lending by seven types of lenders. The final section provides a summary of the observations derived from the analysis.

5.1 THE COOK COUNTY DATA

The analysis contained in this chapter is based upon data provided to JRB by the Chicago Title & Trust Co., Chicago, Illinois. Provided in the form of a computer listing, the data display the mortgages originated by each lender in Cook County for 1977. JRB developed data entry procedures and computer programs enabling the data to be entered into an automated data base, validated, and processed. The number, amount, and percentage of mortgage loans originated by the various types of lenders were determined and analyzed to assess the lending patterns in Cook County.

The Chicago Title and Trust Company maintains a complete automated data base of the real estate title transactions in Cook County. The title changes recorded in this data base identify mortgages when they are originated as part of the change in property title. Because the data used for this study were derived from information on title changes, only those mortgage loans that accompany changes in property titles are included. Consequently, home improvement loans or refinanced loans which are reported in disclosure statements are not included in these data. Furthermore, the Chicago Title

listing provides only three data elements for the loans on their roster. These are:

1. The name of the lender
2. The number of mortgage loans originated by the lender
3. The total amount of the mortgage loans originated by the lender.

These limitations precluded the selection of mortgage loans in accordance with the criteria of Regulation C. For example the information available did not allow mortgage loans for residential properties to be differentiated from those for commercial properties Additionally, determination of the type of loan (e.g., conventional, VA, FHA, etc the number of living units, or whether or not the property is occuppied by the owner was not possible. Accordingly, the criteria used to include and exclude mortgage loans in the data base from which the completeness analysis was performed have been carefully defined. Given these criteria, the Chicago Title data provide a suitable basis for estimating the relative volume and percentage of mortgage loans originated by various lenders in Cook County.

A major limitation of the Chicago Title data base was the absence of a unique code or standardized spelling for each lender. The sample listing shown in Figure 5. for example reveals how "First Federal Savings & Loan of Wilmette" has been spelled (i.e., entered into the Chicago Title data base) eight different ways. The lack of a unique-lender code or a standardized spelling for each lender precluded automated sorting of Chicago Title's data base to select the mortgage loans originated by each lender or type of lender. At JRB's request therefore Chicago Title sorted their 1977 mortgage loan file for Cook County and produced listing of the number of mortgage loans and the total amount of the mortgage loans for each unique lender spelling. The resultant listing contained approximately 3,300 individual lender spellings along with the number and total dollar volume of mortgage loans originated by various lenders. Figure 5.1 shows a sample of this listing.

CHAPTER 5

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This chapter presents the results of the completeness analysis for Cook County, Illinois This presentation is in four sections The first section contains a discussion of the data utilized for the completeness analysis In section 5.2 JRB's procedures for data entry, validation, and processing are discussed. Section 5.3 presents the results of the completeness analysis for Cook County in terms of the volume and percentage of mortgage lending by seven types of lenders. The final section provides a summary of the observations derived from the analysis.

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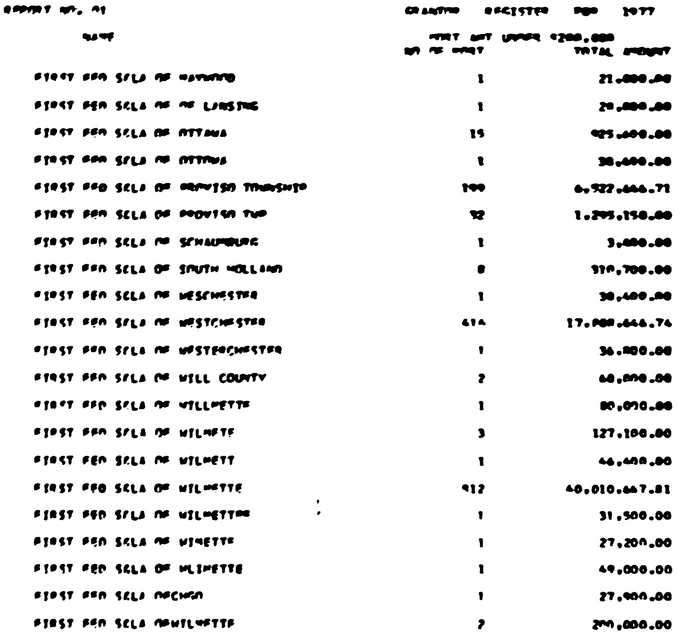
listing provides only three data elements for the loans on their roster. These are:

1. The name of the lender
2. The number of mortgage loans originated by the lender
3. The total amount of the mortgage loans originated by the lender.

These limitations precluded the selection of mortgage loans in accordance with the criteria of Regulation C. For example the information available did not allow mortgage loans for residential properties to be differentiated from those for commercial properties Additionally determination of the type of loan (e.g., conventional, VA, FHA, etc.), the number of living units, or whether or not the property is occuppied by the owner was not possible. Accordingly, the criteria used to include and exclude mortgage loans in the data base from which the completeness analysis was performed have been carefully defined. Given these criteria the Chicago Title data provide a suitable basis for estimating the relative volume and percentage of mortgage loans originated by various lenders in Cook County.

A major limitation of the Chicago Title data base was the absence of a unique code or standardized spelling for each lender. The sample listing shown in Figure 5. for example reveals how "First Federal Savings & Loan of Wilmette" has been spelled (i.e., entered into the Chicago Title data base) eight different ways. The lack of a unique-lender code or a standardized spelling for each lender precluded automated sorting of Chicago Title data base to select the mortgage loans originated by each lender or type of lender. At JRB's request therefore Chicago Title sorted their 1977 mortgage loan file for Cook County and produced a listing of the number of mortgage loans and the total amount of the mortgage loans for each unique lender spelling. The resultant listing contained approximately 300 individual lender spellings along with the number and total dollar volume of mortgage loans originated by various lenders. Figure 5.1 shows a sample of this listing.



```
REPORT NO. 91                                 GRANTEE   REGISTER   FOR   1977

      NAME                                        MORT AMT UNDER $200,000
                                              NO OF MORT           TOTAL AMOUNT

   FIRST FED S&LA OF HARVARD                         1               21,000.00

   FIRST FED S&LA OF OF LANSING                      1               20,000.00

   FIRST FED S&LA OF OTTAWA                         15              425,600.00

   FIRST FED S&LA OF OTTAWA                          1               30,600.00

   FIRST FED S&LA OF PROVISO TOWNSHIP              190            6,522,666.71

   FIRST FED S&LA OF PROVISO TWP                    32            1,295,150.00

   FIRST FED S&LA OF SCHAUMBURG                      1                3,400.00

   FIRST FED S&LA OF SOUTH HOLLAND                   8              310,700.00

   FIRST FED S&LA OF WESCHESTER                      1               30,400.00

   FIRST FED S&LA OF WESTCHESTER                   614           17,908,666.74

   FIRST FED S&LA OF WESTERCHESTER                   1               36,800.00

   FIRST FED S&LA OF WILL COUNTY                     2               60,000.00

   FIRST FED S&LA OF WILLMETTE                       1               80,020.00

   FIRST FED S&LA OF WILMETE                         3              127,100.00

   FIRST FED S&LA OF WILMETT                         1               46,400.00

   FIRST FED S&LA OF WILMETTE                      912           40,010,667.81

   FIRST FED S&LA OF WILMETTEE                       1               31,500.00

   FIRST FED S&LA OF WIMETTE                         1               27,200.00

   FIRST FED S&LA OF WLIMETTE                        1               49,000.00

   FIRST FED S&LA OFCHGO                             1               27,900.00

   FIRST FED S&LA OFWILMETTE                         2              200,000.00
```

FIGURE 5.1: SAMPLE OF CHICAGO TITLE LISTING

Next, larger commercial loans not relevant to the completeness study were eliminated. This was done by establishing an upper limit of $200,000 and including only mortgage loans less than this value in the final listing. Totals from the final list indicate that 125,307 mortgage loans were originated in 1977 with a dollar amount in excess of 4. billion. This listing was reviewed with personnel from Chicago Title to verify that the total volume of mortgage loans indicated for Cook County were consistent with other previous estimates. Following this final check on the accuracy of the list, JRB initiated steps to code the data, enter it into an automated data base and process the data to generate a series of completeness reports.

5.2 DATA ENTRY, VALIDATION, AND PROCESSING

Before an integrated data base could be created, coding procedures were needed. Their purpose was to consolidate the number of loans and the value of loans for each institution from the various entries on the listing from Chicago Title Trust Company. To accomplish this, a single digit "lender-type" code, as shown in Table 5.1, was established. A dictionary of standard institution names was created. Each standard name was assigned a unique three letter code. This facilitated data entry and subsequent sorting. Five of the twelve banks with first names beginning with the letter "A," for example, were given the following codes:

1ABT	American National Bank of Chicago
1AET	Aetna St. Bank
1ALG	Algonquin St. Bank
1ALL	All American Bank
1ALS	Alsip Bank

Next, two separate files for the Cook County data base were created. The "code" file was established to map the non-standard institution names to the dictionary of standard institution names, and to assign an identification code to each of the standard names. The "mortgage" file was organized to

DATA ELEMENT	DEFINITION
Lender-type Code	A single digit identifying the type of lender: 1. HMDA Banks 2. Non-HMDA Banks 3. HMDA S&Ls 4. Non-HMDA S&Ls 5. Mortgage Companies 6. Miscellaneous Companies 7. Private Parties
Lender-identification Code	A three-character abbreviation of the lender's name. Miscellaneous Companies and Private Parties are not included.
Loan-count	Number of loans made by this lender under one spelling of the lender name. Since each of the data base records represent one line of the Chicago Title report, there may be several records for each lender.
Loan-amount	The total dollar amounts of the loans associated with each lender spelling
Lender-name	Name of lender using standardized spelling and abbreviations

TABLE 5.1: COOK COUNTY DATA ELEMENT DEFINITIONS

contain one record for each line item in the listing provided by Chicago Title and Trust Company The data elements contained in each record of the mortgage file, and a brief definition of each, are presented in Table 5.1. Technical specifications relevant to the Cook County data base have been included as Appendix F of this report.

The information contained in the listing from Chicago Title and Trust Company was converted to a machine readable format by the JRB staff using an interactive data entry and edit program supported by JRB's PDP 11/34 computer. Each line item was considered a record, and groups of records were batched for control and audit purposes For each group of records entered, the loan count and dollar totals for the batch was compared to manually generated batch totals. After all batches were entered, the batch totals were analyzed for total balance. When all the totals agreed, they were merged to create the Cook County data base.

A subsequent verification was performed to check the codes for authorized lenders. Both the "mortgage" file and the"code" file were sorted by codes, then a program read both sorted files and compared the codes in each record. If the codes in the two files did not match, this meant that one of several potential errors had occurred. These errors and their appropriate corrective actions are shown in Table 5.2.

When a lender code in a mortgage record had no match in the code table file, the code was looked up in our manually prepared original table and inserted into the code file. When a code was not used in the mortgage file, the original Chicago Title and Trust Company report was checked for an entry for that lender, and the mortgage file [illegible] updated where appropriate The verified and validated Cook County data base was then used to prepare the completeness report presented in the following section and in Appendix C.

TABLE 4.3: MORTGAGE LOAN ORIGINATIONS IN ERIE COUNTY DURING 1977
(Thousands of Dollars)

Lender	Erie County		Buffalo		Rest of County	
COMMERCIAL BANKS (Total)	84,914	----	12,503	----	72,410	----
Commercial Banks (HMDA)	----	82,490	----	12,309	----	70,180
Commercial Banks (Other)	----	2,424	----	194	----	2,230
SAVINGS & LOAN ASSNS (Total)	85,834	----	8,420	----	77,514	----
S&L Associations (HMDA)	----	84,709	----	8,147	----	76,562
S&L Associations (Other)	----	1,125	----	273	----	852
MUTUAL SAVINGS BANKS (Total)	180,953	----	35,209	----	145,744	----
Mutual Savings Banks (HMDA)	----	180,799	----	35,180	----	145,619
Mutual Savings Banks(Other)	----	154	----	29	----	125
MISCELLANEOUS COMPANIES	40,094	40,094	13,405	13,405	26,689	26,689
PRIVATE PARTIES	34,424	34,424	9,475	9,475	24,949	24,949
TOTAL	426,218	426,218	79,011	79,011	347,208	347,208
Percentage of County Total	100%	100%	18.5%	18.5%	81.5%	81.5%

TABLE 4.4: PERCENTAGE OF THE DOLLAR AMOUNT OF MORTGAGE LENDING IN ERIE COUNTY DURING 1977

Lender	Erie County		Buffalo		Rest of County	
COMMERCIAL BANKS (Total)	19.9	----	15.8	----	21.0	----
Commercial Banks (HMDA)	----	19.3	----	15.5	----	20.3
Commercial Banks (Other)	----	0.6	----	0.3	----	0.7
SAVINGS & LOAN ASSNS (Total)	20.1	----	10.6	----	22.3	----
S&L Associations (HMDA)	----	19.9	----	10.3	----	22.1
S&L Associations (Other)	----	0.2	----	0.3	----	0.2
MUTUAL SAVINGS BANKS (Total)	42.5	----	44.6	----	41.9	----
Mutual Savings Banks (HMDA)	----	42.5	----	44.6	----	41.9
Mutual Savings Banks (Other)	----	----	----	----	----	----
MISCELLANEOUS COMPANIES	9.4	9.4	17.0	17.0	7.7	7.7
PRIVATE PARTIES	8.1	8.1	12.0	12.0	7.2	7.2

These data indicate that all lenders combined to originate 4,965 mortgage loans secured by liens on properties within the City of Buffalo and 13,056 mortgage loans secured by liens on properties in the rest of Erie County.

These data on patterns of lending are surprising when viewed along with the housing data provided by the Phase 1 Contractor. The housing data show that 198,258 (i.e., 59.2 percent) of the 334,809 1-4 family housing units in Erie County were located within the city limits of Buffalo.[3] Based on these data and the data in Table 4.2, 2.5 loans were originated per each one hundred 1-4 family housing units within the city limits and 9.6 loans were originated per each one hundred 1-4 family housing units in the rest of Erie County. Thus, the rate of lending is 3.8 times greater for units outside the city limits.

Fourteen reports showing the volumes and percentages of lending by the various types of lenders are included in Appendix B. These detailed reports show the lending activity by each individual commercial bank, mutual savings bank, and savings and loan association within the City of Buffalo and the rest of Erie County. These reports also show the number and amounts of the mortgage loans originated by each of the eight types of lenders in the 48 localities (i.e., towns) within Erie County.

4.4 OBSERVATIONS

The following findings and observations are drawn from these data:

- A total of 18,021 mortgage loans with a total value of $426,218,000 were originated within Erie County in 1977.
- Approximately 28 percent of the originations and 18 percent of the dollar volume of all mortgage loans in Erie County were applied to properties within the city limits of Buffalo.

- The rate of lending, in terms of number of loans per 100 1-4 family units, is 3.8 times greater for units outside the city limits than for those inside.
- Depository institutions provided 82.5 percent of the mortgage money, and this compares closely with the national average of 80 percent.
- Approximately 99 percent of the mortgage money originated by depository institutions were made by institutions subject to either Federal or state disclosure reporting in the Buffalo SMSA. This indicates that the volume of lending by depository institutions not subject to disclosure reporting (i.e., those with assets under $10 million and those without offices within the Buffalo SMSA) was not a significant omission in disclosure reporting.
- Mutual savings banks were the dominant mortgage lender in Erie County with approximately 42 percent of the total dollar volume of mortgage loan originations. This volume is greater than the combined volume of mortgage loan originations by commercial banks and savings and loan associations each of whom accounted for approximately 20 percent of the total volume.
- Thrift institutions (i.e., mutual savings banks and savings and loan associations) together originated approximately 62 percent of the total dollar volume of mortgage loan originations in Erie County.
- Mutual savings banks originated slightly more than 50 percent of their mortgage loans for properties within the City of Buffalo; whereas, commercial banks and savings and loan associations originated substantially less than 50 percent of their mortgage loans for properties within the City of Buffalo.

A further discussion of the findings for Erie County and a comparison with the findings of the other two counties is presented in Chapter 6.

CHAPTER 5
COOK COUNTY

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The analysis contained in this chapter is based upon data provided to JRB by the Chicago Title & Trust Co., Chicago, Illinois Provided in the form of a computer listing, the data display the mortgages originated by each lender in Cook County for 1977. JRB developed data entry procedures and computer programs enabling the data to be entered into an automated data base, validated, and processed. The number amount, and percentage of mortgage loans originated by the various types of lenders were determined and analyzed to assess the lending patterns in Cook County.

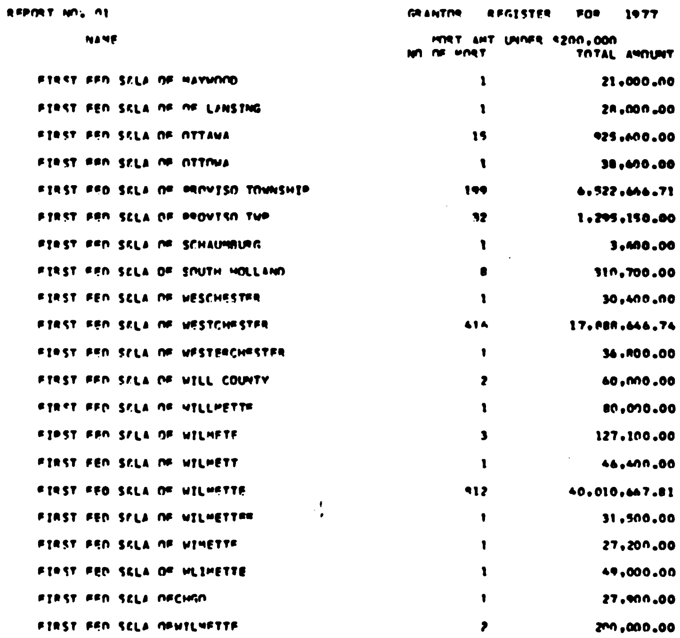
The Chicago Title and Trust Company maintains a complete automated data base of the real estate title transactions in Cook County. The title transactions in this data base identify mortgages when they are originated as part of the change in property title Because the data used for this study we derived from information on title changes only those mortgage loans that accompany changes in property titles are included. Consequently home improvement loans or refinanced loans which are reported in disclosure statements are not included in these data. Furthermore, the Chicago Title

listing provides only three data elements for the loans on their roster. These are:

1. The name of the lender
2. The number of mortgage loans originated by the lender
3. The total amount of the mortgage loans originated by the lender.

These limitations precluded the selection of mortgage loans in accordance with the criteria of Regulation C. For example, the information available did not allow mortgage loans for residential properties to be differentiated from those for commercial properties. Additionally determination of the type of loan (e.g., conventional, VA, FHA, etc.) the number of living units, or whether or not the property is occupied by the owner was not possible Accordingly, the criteria used to include and exclude mortgage loans in the data base from which the completeness analysis was performed have been carefully defined. Given these criteria, the Chicago Title data provide a suitable basis for estimating the relative volume and percentage of mortgage loans originated by various lenders in Cook County.

A major limitation of the Chicago Title data base was the absence of a unique code or standardized spelling for each lender. The sample listing shown in Figure .1 for example, reveals how "First Federal Savings & Loan of Wilmette" has been spelled (i.e., entered into the Chicago Title data base) eight different ways The lack of a unique-lender code or standardized spelling for each lender precluded automated sorting of Chicago Title's data base to select the mortgage loans originated by each lender or type of lender. At JRB request therefore Chicago Title sorted their 1977 mortgage loan file for Cook County and produced a listing of the number of mortgage loans and the total amount of the mortgage loans for each unique lender spelling. The resultant listing contained approximately 300 individual lender spellings along with the number and total dollar volume of mortgage loans originated by various lenders. Figure 5.1 shows a sample of this listing.



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REPORT NO. 01                                          GRANTOR   REGISTER   FOR   1977
       NAME                                               MORT AMT UNDER $200,000
                                                       NO OF MORT            TOTAL AMOUNT

    FIRST FED S&LA OF MAYWOOD                                    1              21,000.00
    FIRST FED S&LA OF OF LANSING                                 1              28,000.00
    FIRST FED S&LA OF OTTAWA                                    15             925,600.00
    FIRST FED S&LA OF OTTOWA                                     1              38,600.00
    FIRST FED S&LA OF PROVISO TOWNSHIP                         199           6,522,646.71
    FIRST FED S&LA OF PROVISO TWP                               32           1,295,150.00
    FIRST FED S&LA OF SCHAUMBURG                                 1               3,600.00
    FIRST FED S&LA OF SOUTH HOLLAND                              8             310,700.00
    FIRST FED S&LA OF WESCHESTER                                 1              30,400.00
    FIRST FED S&LA OF WESTCHESTER                              414          17,088,646.74
    FIRST FED S&LA OF WESTERCHESTER                              1              36,800.00
    FIRST FED S&LA OF WILL COUNTY                                2              60,000.00
    FIRST FED S&LA OF WILLMETTE                                  1              80,000.00
    FIRST FED S&LA OF WILMETE                                    3             127,100.00
    FIRST FED S&LA OF WILMETT                                    1              46,400.00
    FIRST FED S&LA OF WILMETTE                                 912          40,010,667.81
    FIRST FED S&LA OF WILMETTEE                                  1              31,500.00
    FIRST FED S&LA OF WIMETTE                                    1              27,200.00
    FIRST FED S&LA OF WLIMETTE                                   1              49,000.00
    FIRST FED S&LA OFCHGO                                        1              27,900.00
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```

FIGURE 5.1: SAMPLE OF CHICAGO TITLE LISTING

JRB Associates, Inc.

Next, larger commercial loans not relevant to the completeness study were eliminated. This was done by establishing an upper limit of $200,000 and including only mortgage loans less than this value in the final listing. Totals from the final list indicate that 125,307 mortgage loans were originated in 1977 with a dollar amount in excess of 4.5 billion. This listing was reviewed with personnel from Chicago Title to verify that the total volume of mortgage loans indicated for Cook County were consistent with other previous estimates. Following this final check on the accuracy of the list, JRB initiated steps to code the data, enter it into an automated data base and process the data to generate a series of completeness reports.

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1ALG Algonquin St. Bank
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1ALS Alsip Bank

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DATA ELEMENT	DEFINITION
Lender-type Code	A single digit identifying the type of lender: 1. HMDA Banks 2. Non-HMDA Banks 3. HMDA S&Ls 4. Non-HMDA S&Ls 5. Mortgage Companies 6. Miscellaneous Companies 7. Private Parties
Lender-identification Code	A three-character abbreviation of the lender's name. Miscellaneous Companies and Private Parties are not included.
Loan-count	Number of loans made by this lender under one spelling of the lender name. Since each of the data base records represent one line of the Chicago Title report, there may be several records for each lender.
Loan-amount	The total dollar amounts of the loans associated with each lender spelling
Lender-name	Name of lender using standardized spelling and abbreviations

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A subsequent verification was performed to check the codes for authorized lenders. Both the "mortgage" file and the"code" file were sorted by codes, then a program read both sorted files and compared the codes in each record. If the codes in the two files did not match, this meant that one of several potential errors had occurred. These errors and their appropriate corrective actions are shown in Table 5.2.

When a lender code in a mortgage record had no match in the code table file, the code was looked up in our manually prepared original table and inserted into the code file. When a code was not used in the mortgage file, the original Chicago Title and Trust Company report was checked for an entry for that lender, and the mortgage file was updated where appropriate The verified and validated Cook County data base was then used to prepare the completeness report presented in the following section and in Appendix C.

Error	Cause	Correction
Code not in Table But in Data Base	Misspelled in Table	Correct Misspelling
	Omitted from Table	Insert in Table
	Misspelled in Mortgage Record	Correct Misspelling
Code in Table But not in Data Base	Misspelled in Mortgage File	Correct Misspelling
	Omitted Mortgage Record	Insert in Data Base
	Misspelled in Table	Correct Misspelling

TABLE 5.2: CODE VERIFICATION PROCESS

5.3 COMPLETENESS ANALYSIS FOR COOK COUNTY

A summary of the volume and share of mortgage lending in 1977 for Cook County, as determined from the Chicago Title data, is shown in Table 5.3. The table shows the number of loans, amounts of the loan, and the percentages of the number and amounts of the loans originated by the seven types of lenders. The lending patterns of commercial banks and savings and loan associations are listed under two categories: "HMDA" (those subject to reporting in the Chicago SMSA), and "Other" (those not subject to reporting in the Chicago SMSA).

Six reports showing the volume and percentage of lending by the various types of lenders are included in Appendix C. These detailed reports were prepared for the following six classes of lenders:

- All lenders, by type
- HMDA banks, by name
- Other banks, by name
- HMDA S&Ls, by name
- Other S&Ls, by name
- Mortgage companies, by name

5.4 OBSERVATIONS

The following findings and observations are drawn from these data:

- A total of 125,307 mortgage loans with total value of $4,556,529,000 were originated within Cook County in 1977.
- Depository institutions accounted for more than 85 percent of the mortgage originations in 1977 and provided in excess of 90 percent of the mortgage funding. This percentage of funding is well above the national average of 80 percent.

TABLE 5.3: MORTGAGE LOAN ORIGINATIONS IN COOK COUNTY DURING 1977

Lender	Number of Loans	Loan Amount ($000)*	Percentage of Loans	Percentage of Dollars
Banks	29,131	976,015	23.3	21.4
HMDA	28,647	957,143	22.9	21.0
Other	484	18,872	0.4	0.4
Savings & Loan Associations	78,145	3,128,650	62.3	68.7
HMDA	75,970	3,048,559	60.6	66.9
Other	2,175	80,091	1.7	1.8
Mortgage Companies	7,397	242,013	5.9	5.3
Miscellaneous Companies	3,996	81,073	3.2	1.8
Private Parties	6,638	128,776	5.3	2.8
TOTAL	125,307	4,556,529	100.0	100.0

* NOTE: Due to rounding, the totals do not equal sum of the individual amounts in each column

- Banks made 29,131 loans in 1977 in the total dollar amount of $976,015,000. This accounted for 23.3 percent of mortgage originations in 1977 and provided 21.4 percent of the mortgage funding.
- Savings and loans made 78,145 loans in 1977 in the total dollar amount of 3,128,650,000. This acoounted for 62.3 percent of mortgage originations in 1977 and 68.7 percent of mortgage funding.
- Approximately 97.5 percent of the $4,104,665,000 in mortgage loans originated by depository institutions was made by institutions subject to either Federal or state disclosure reporting in the Chicago SMSA. This indicates that the volume of lending by depository institutions not subject to disclosure reporting (i.e. those with assets under $10 million and those without offices within the Chicago SMSA) was not a significant omission in disclosure reporting.
- Forty mortgage companies contributed 5.3 percent of the dollar volume of mortgage loans, and this share is well below the national average of 13 percent.
- Private parties made 6,638 loans in 1977 in a total dollar amount of $128 766,000. This accounted for 5.3 percent of the loans in Cook County in 1977 and 2.8 percent of the mortgage funding.
- Miscellaneous companies made 3,996 loans in 1977 in a total dollar amount of $81,073,000. This accounted for 3.2 percent of the loans in Cook County in 1977 and 1.8 percent of the mortgage funding.

A further discussion of the findings for Cook County and a comparison with the findings of the other two counties is presented in Chpater 6.

CHAPTER 6

COMPARISON OF LENDING PATTERNS AND STUDY FINDINGS

This chapter presents a comparison of mortgage lending patterns within the three counties of the study and discusses differences among the counties and the national lending pattern. Section 6.2 presents a discussion of lessons learned in gathering, validating, and using data to assess mortgage lending activity. A final section summarizes the findings of the completeness analysis.

6.1 MORTGAGE LENDING PATTERNS

Table 6.1 shows a comparison of the amount of 1977 mortgage loan originations in the United States and in the three counties in the study. In 1977, $173 billion in residential mortgage loans were originated in the United States.[2] Depository institutions accounted for approximately 82 percent of these originations as constrasted to mortgage companies which accounted for 13.5 percent. Miscellaneous companies and private parties made up the remaining 4.5 percent of the total volume of lending. Also shown in 6.1 is the dollar volume of mortgage loans originated by the various lenders in each of the three counties. These figures clearly demonstrate the significant deviations from national averages occurring in individual counties.

Table 6.2 presents a comparison of the number of mortgage loan originations by various lender-types within the three counties. These data illustrate the significant variations in the loan origination patterns among counties. The nature and causes of these variations are explored in subsequent sections.

6.1.1 Completeness at the National and County Levels

The study results show the extent to which an aggregation of the disclosure statements of depository institutions subject to Federal or state

Lender Type	United States		San Diego County		Erie County		Cook County	
	$ (Millions)	%	$ (Thousands)	%	$ (Thousands)	%	$ (Thousands)	%
Commercial Banks	38,202	22.1	283,682	9.5	84,914	19.9	976,015	21.4
HMDA			279,144	9.3	82,490	19.3	957,143	21.0
Other			4,538	0.2	2,424	0.6	18,872	0.4
Mutual Savings Banks	10,293	5.9*	--	--	180,953	42.5	--	--
HMDA			--	--	180,799	42.5	--	--
Other			--	--	154	--	--	--
Savings & Loan Associations	93,141	53.8	1,633,339	54.7	85,834	20.1	3,128,650	68.7
HMDA			1,588,833	53.2	84,709	19.9	3,048,559	66.9
Other			44,506	1.5	1,125	0.2	80,091	1.8
Mortgage Companies	23,295	13.5	470,278	15.7	40,094	9.4	242,013	5.3
Miscellaneous Companies	8,081	4.7	219,156	7.4			81,073	1.8
Private Parties			380,763	12.7	34,424	8.1	128,776	2.8
TOTAL	173,012	100.0	2,987,921	100.0	426,218	100.0	4,556,529	100.0

* In 11 major MSB States MSB hold 43.4% of debt held by depository institutions CB's hold 22.5% of that debt and S&L's hold 34.1%

CHAPTER 6

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TABLE 6.1: COMPARISON OF THE AMOUNT OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS DURING 1977

	United States		San Diego County		Erie County		Cook County	
	$ (Millions)	%	$ (Thousands)	%	$ (Thousands)	%	$ (Thousands)	%
ial Banks	38,202	22.1	283,682	9.5	84,914	19.9	976,015	21.4
			279,144	9.3	82,490	19.3	957,143	21.0
			4,538	0.2	2,424	0.6	18,872	0.4
ks	10,293	5.9*	--	--	180,953	42.5	--	--
			--	--	180,799	42.5	--	--
			--	--	154	--	--	--
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TOTAL	173,012	100.0	2,987,921	100.0	426,218	100.0	4,556,529	100.0

* In 11 major MSB states MSB hold 43.4% of debt held by depository institutions CB's hold 22.5% of that debt and S&L's hold 34.1%

TABLE 6.2: COMPARISON OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS DURING 1977

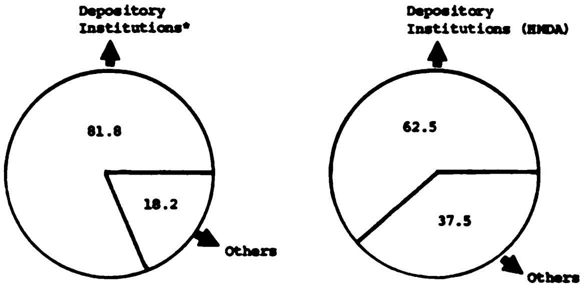
Lender Type	San Diego County		Erie County		Cook County	
	No. of Loans	%	No. of Loans	%	No. of Loans	%
Commercial Banks	5,072	9.5	3,470	19.2	29,131	23.3
HMDA	4,996	9.3	3,390	18.8	28,647	22.9
Other	76	0.2	80	0.4	484	0.4
Mutual Savings Banks	--	--	7,291	40.5	--	--
HMDA	--	--	7,284	40.5	--	--
Other	--	--	7	--	--	--
Savings & Loan Associations	29,823	54.7	3,094	17.2	78,145	62.3
HMDA	28,965	53.2	3,038	16.9	75,970	60.6
Other	858	1.5	56	0.3	2,175	1.7
Mortgage Companies	10,290	15.7	2,051	11.4	7,397	5.9
Miscellaneous Companies	4,895	7.4			3,996	3.2
Private Parties	8,853	12.7	2,115	11.7	6,638	5.3
TOTAL	58,903	100.0	18,021	100.0	125,307	100.0

disclosure reporting requirements fall short of providing a complete picture of mortgage lending in the nation as a whole or within a given county. In addition, the study discusses some of the important reasons why variations from the national lending pattern occur at the county level.

Figure 6.1 presents a comparison of completeness at the national and county levels. The figures are in terms of the percentage of the dollar volume of mortgage loans originated by depository institutions subject to disclosure reporting versus all other lenders. The results show that on a national basis, nearly one fifth (i.e., 18.2 percent) of the mortgage monies are provided by lenders other than depository institutions. Since not all depository institutions are subject to disclosure reporting, the percentage of mortgage monies not reported on disclosure statements is in excess of 18.2 percent.

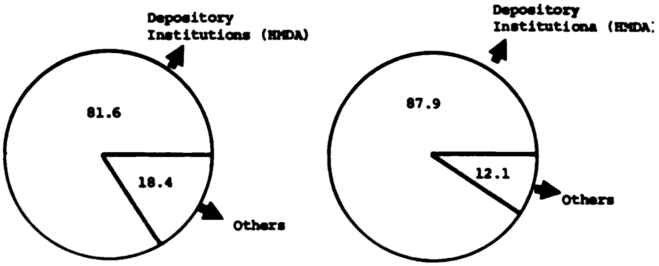
Variations in the percentage of mortgage lending by depository institutions subject to disclosure reporting in the three counties is shown clearly in Figure 6.1. In San Diego County, an aggregation of Federal and state disclosure statements depicts less than two-thirds (i.e., 62.5 percent) of the mortgage lending in the county. In contrast, aggregation of disclosure statements for Cook and Erie County depicts nearly 88 percent of the mortgage lending.

In interpreting the data from the aggregated disclosure statements, an awareness of the extent to which the compiled data depict the complete lending activity for an SMSA or portion of an SMSA appears essential. Data in disclosure statements show the individual and aggregate lending patterns of depository institutions, but reveal nothing about the reasons for the patterns. In fact, issues such as demand, competition, and market conditions must be known before the reason behind the patterns can be fully understood.



NATIONAL

SAN DIEGO COUNTY



ERIE COUNTY

COOK COUNTY

*Includes all depository institutions (including those not subject to disclosure reporting)

FIGURE 6.1: COMPLETENESS: Percentage of Mortgage Monies Originated by Institutions Subject to HMDA

6.1.2 Variation in Mortgage Lending by Depository Institutions

Results from the completeness analysis show that the lending patterns of depository institution varied significantly among the three counties The percentage of lending in each county by commercial banks mutual savings banks and savings and loan associations subject to disclosure reporting along with the national percentages is shown in Figure 6. The national percentages presented can be misleading because mutual savings banks are present in only 17 states. The percentage of their mortgage lending in these states therefore, is much higher than their national average of 5.9 percent. Mutual savings banks, for example, hold nearly 82 billion of mortgage debt in these 7 states, compared to $85 billion held by savings and loan associations. Thus, the presence of mutual savings banks in Erie County but not San Diego or Cook counties is the most significant cause of variations in the percentage of lending by depository institutions. In Erie County mutual savings banks originated 42.5 percent of the mortgage monies in 1977--more than twice the volume of either savings and loan associations or commercial banks.

Clearly, the mutual savings banks in Erie County originated mortgages that savings and loan associations might otherwise have made. These savings and loan associations originated only 20. percent of the mortgage monies in Erie County, a figure representing less than one-half of either the national average or that in the other two counties.

The combined volume of mortgage lending by mutual savings banks and savings and loan associations provides a meaningful statistic from which to compare mortgage lending among the counties. Nationally, in 1977 these institutions combined to originate $103 billion or 59.7 percent of the $173 billion in residential mortgages Savings and loan associations were the only thrift institutions present in San Diego and Cook counties These associations originated 54.7 percent of the dollar volume in San Diego and 68 7 percent of the dollar volume in Cook County. Mutual savings banks and savings and loan associations combined to originate 62.3 percent of the dollar volume in Erie County.

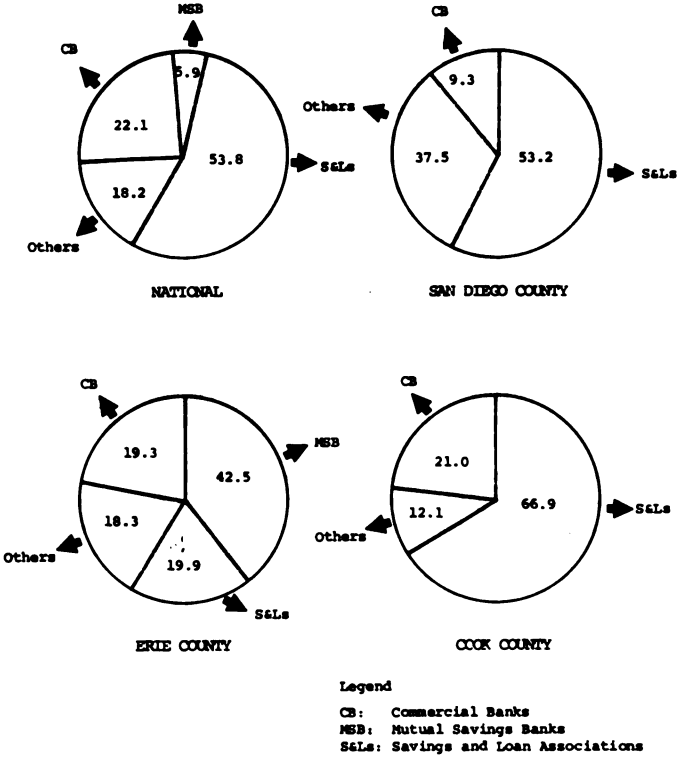


FIGURE 6.2: Variation in Lending by Depository Institutions Subject to the Home Mortgage Disclosure Act

These data suggest that together, mutual savings banks and savings and loans can be expected to originate from one-half to two-thirds of the mortgage monies under many varied conditions.

The relative share of lending by commercial banks also varies significantly among the three counties. The percentage of originations by commercial banks varied from 21.4 percent in Cook County to only 9.5 percent in San Diego County. In addition, the percentage of originations in Cook County and Erie County (i.e., 19.9 percent) comes close to the national average of 22.1 percent.

The relatively low percentage of mortgage lending by commercial banks in San Diego is undoubtedly the result of many factors. One such factor is the unprecedented demand for housing in San Diego County[8] and the resulting tight money conditions Two major causes of the high demand are: 1) approximately 35 000 people migrated to San Diego County in 1977, and 2) the large number of people born during the 1950's now entering the housing market. These conditions placed a high demand on all types of loans in the county. Commercial banks are more interested in other types of loans (e.g., consumer or commercial) than mortgage loans because they are generally short-term and provide a better match between the maturity of assets (loans) and liabilities (deposits). When the demand for commercial loans is high, banks will meet the demand for commercial loans, thus slighting mortgage lending. These market conditions account for the relatively low percentage of mortgage lending by commercial banks in San Diago.

6.1.3 Mortgage Companies and Other Lenders

Mortgage companies performed in their traditional manner in the three counties--moving money from geographic areas with an oversupply of capital (e.g., deposits) to areas with insufficient capital for growth (e.g., housing demand). Thus, mortgage companies in San Diego were selling their originations to buyers in capital-surplus areas outside of San Diego and at a higher rate (i.e., 15.7 percent) than the national average (i.e., 13.5 percent). Conversely, their percentages of lending in Erie County and Cook County were substantially lower. This is explained by the availability of capital in these two areas, and in Erie County by the presence of usury limits on rates and yields.

The other lenders fall into the broad category of miscellaneous companies and private individuals. As a group, they contributed substantially to the mortgage market, originating 4.7 percent nationally in 1977 In the three counties we studied their share ranged from 20.1 percent in San Diego County to 4.6 percent in Cook County This group includes Federal, state and local agencies, government and private pension funds credit unions, life insurance companies, real estate investment trusts, miscellaneous companies, and individuals.

6.1.4 Impact of Exemptions

Regulation C specifies that depository institutions with assets less than $10 million are not required to prepare disclosure statements. The regulation also specifies that depository institutions originating or purchasing mortgage loans secured by residential properties in a given SMSA need not itemize their loans by census tracts in a disclosure statement unless their home office or one of their branch offices is located within the SMSA. As shown in Table 6.3, the percentages of the total mortgage lending for such depository institutions (i.e. those not subject to disclosure reporting) ranged from less than 1 percent in Erie County to slightly more than 2 percent in Cook County. This volume was not a significant omission in disclosure reporting.

6.1.5 Dominance by a Few Lenders

Using the data shown in the appendices, the depository institutions in each county were ranked according to the total dollar volume of mortgage loans originated. From this list, the ten leading lenders in each county were identified. Of these 30 top lenders, 24 were savings and loan associations,

TABLE 6.3 PERCENTAGE OF THE AMOUNT OF MORTGAGE LENDING

BY DEPOSITORY INSTITUTIONS

Type of Depository Institution	San Diego	Erie County	Cook County
Subject to HMDA	62.5	81.7	87.9
Not Subject to HMDA *	1.7	0.8	2.2

* Commercial Banks, Mutual Savings Banks, Savings and Loan Associations

three were commercial banks and three were mutual savings banks. In San Diago, all ten lenders were savings and loan associations; these institutions accounted for approximately 39. percent of the dollar volume of mortgage loans. In Erie County, five of the top lenders were savings and loan associations, three were mutual savings banks and two were commercial banks; these institutions accounted for 73.5 percent of the dollar volume of mortgage loans. The three mutual savings banks contributed the greatest percentage (i.e., 40.3 percent) of the lending within the county. In Cook County, nine of the top ten were savings and loan associations, and one was a commercial bank; these institutions accounted for 28 percent of the dollar volume of mortgage loans. The number of depository institutions present in each county affected the percentages by the leading institutions. Erie County, for instance has 43 depository institutions; whereas, Cook County has nearly 600 depository institutions.

6.2 LESSONS LEARNED IN ACQUIRING AND USING DATA FOR THE COMPLETENESS ANALYSIS

In excess of 50 percent of the effort invested in the completeness analysis was devoted to acquisition, validation and processing of information for the three counties These activities yielded a number of important lessons of interest to those involved in the use and interpretation of information on residential mortgage lending at the county level. These lessons provided insights into the following topics:

- The essential relationship between explicit loan selection criteria and understanding the contents of a mortgage loan data base or report
- The nature and implications of ambiguities in the mortgage loan criteria in Regulation C
- The difficulty of getting mortgage loan information from county offices or title companies to match the mortgage loan information on disclosure statements because of the complexity of the loan selection criteria and the inherent limitations of the criteria codes in title company and county office data.

This section discusses these insights.

6.2.1 The Need for Explicit Criteria

Property transactions and accompanying mortgage loans or deeds of trust exist in many types, forms, and purposes. Any compilation of mortgage loan information is based upon implicit or explicit criteria by which certain loans are included and others are excluded from the compilation.

By far the two most important lessons that were learned during the process of acquiring and using data in this study are: The importance of possessing a clear understanding of the criteria used to create a data base of mortgage loan information, and the need for an awareness of the consequences when the selection criteria are not explicitly defined. When the criteria used to select mortgage loans included in a compilation are not explicitly defined, the user can be unwittingly misled by the results. The problems are multiplied when the compilation is based upon a series of intermediate compilations made by a large number of different organizations each applying their own selection criteria. The next section discusses several shortcomings in the mortgage loan criteria associated with Regulation C.

6.2.2 The Use of Home Mortgage Disclosure Statements

The discerning user of mortgage disclosure statements prepared by depository institutions or state agencies under criteria set forth in Regulation C or state regulations is confronted with a difficult interpretation task. Two basic problems are involved in the use of these data:

- Ambiguities in Regulation C over criteria for inclusion of loans in disclosure statements
- Errors by depository institution personnel in applying criteria.

During the course of this study, one or both of these problems were uncovered in the analysis of three types of loans. These were: assumed loans, refinanced loans, and construction loans.

Assumed Loans: The ambiguity surrounding assumed loans begins with the definition of the loan-type itself. In San Diego, state-chartered institutions are required under the ruling in "Wellingcamp vs. Bank of America" to accept assumptions. This requires a written "release of liability" agreement with the new mortgagor releasing the original mortgagor from the liability. Some might consider a standard definition of an "assumption" to mean a continuation of the existing mortgage at the same interest rate. In practice, many depository institutions in San Diego increase the interest rate yet retained the term "assumption" in referring to the transaction.

Many federally-chartered depository institutions do not allow assumptions. Instead, their trust deeds contain a "due on sales clause" specifying that if there is a change of owner, the trust deed becomes due and payable.

Regulation C does not specify criteria for assumed loans. According to an unofficial opinion rendered by the staff of the Board of Governors of the Federal Reserve System, the intent of Regulation C is that assumed loans be included in disclosure statements if the depository institution has a written agreement with the mortgagor.[9] In such an instance, only the amount of the remaining balance should be included.

Not at all surprisingly, ambiguities in the definition and inclusion criteria in Regulation C for assumed loans result in errors in preparation of the disclosure statement. Indeed, assumed loans are not included in the disclosure statements prepared by the State of California for state-chartered depository institutions. This was not a small omission, for in 1977, 9,500 first trust deeds were assumed in San Diego, and an additional 5,500 first or second trust deeds were assumed. Thus, most assumptions representing in excess of 20 percent of all mortgage loans in San Diego County were not reported. This failure to report was apparently a violation of the intent of Regulation C.

Refinanced Loans: Regulation C does not specify criteria for the inclusion of refinanced loans. The intent of regulation C is that refinanced loans be included in disclosure statements in the full amount of the refinancing.[9] In practice, refinanced loans are included in disclosure statements prepared by the State of California Accuracy audits conducted for this study reveal confusion among depository institutions over the handling of these loans. They indicate that many institutions are either not including refinanced loans at all, or not including them in the full amount. A related problem is that some institutions are including refinances in disclosure when they should have been excluded because of the purpose of the loan.

Construction Loans: The criteria for construction loans are also causing confusion. Regulation C specifies that loans for temporary financing (e.g. construction loans) should not be included in disclosure statements. The term "temporary financing however is not defined From this definition, the intent of Regulation C appears to be that construction loans should be included in disclosure statements when beyond "temporary financing."

Accuracy audits conducted for this study show that confusion over the definition of construction loans is mirrored in disclosure statements. The audits show confusion among a significant number of institutions over inclusion of these loans. This confusion is caused, at least in part, by "construction by owner" loans. These are long term loans under which the owner pay only interest during the construction period and then begins paying prinicipal and interest upon occupancy These "construction by owner" loans are included in disclosure statements prepared by the State of California.

Implications: The dual problems of the absence of explicit criteria in Regulation C, and errors committed by those preparing disclosure statements have important implications for all involved in the disclosure process. For each participant, the implications are different and are listed below:

- **Regulatory Agencies:** These agencies must continually pursue ambiguities in existing definitions, formulate more precise criteria, inform depository institutions, and enforce the standards
- **Depository Institutions:** These institutions need better guidance on criteria. Many need to follow criteria more carefully
- **State Regulators:** State criteria should conform to Regulation C critera
- **Current Users of Disclosure Statements:** These individuals need to exercise great care in using data compilations derived from disclosure statements. Otherwise, they will be unwittingly misled as to the contents of their compilations
- **Researchers:** These individuals need to exercise great care in the application of criteria for their data bases.

6.2.3 Matching Data from County Offices and Title Companies to Regulation C Criteria

An additional set of problems is encountered when the attempt is made to match data from county offices or title companies to intended Regulation C criteria. In addition to problems resulting from ambiguities in Regulation C, certain data elements and characteristics are simply not found on these loan rosters. The loan types or characteristics not included are:

- Refinanced loans
- Assumptions
- No way to differentiate temporary financing from long term construction by owner
- No way to separate out loans for unimproved property
- No definitive way to separate out mortgage loans made for business purposes or commercial properties.

These limitations make it impossible to obtain a precise match between the intended Regulation C criteria and data on mortgage loans obtained from title companies and county offices. Even so, this study demonstrates that with considerable care and effort mortgage loan data for all lenders can be obtained and, under properly qualified and defined conditions, used to portray the complete pattern of lending within a county.

6.2.4 Suggestions for Improving the Criteria for Including Mortgage Loans in Disclosure Statements

Given the problems outlined in this section, we believe that two relatively simple steps could be implemented to provide an improved basis for selecting mortgage loans for inclusion in disclosure statements. Accordingly, we suggest the regulatory agencies consider the following two steps:

- Obtain a definitive description of how mortgage loans are formed and passed from one party to another in various parts of the country. This could be done through creation of a descriptive model of the lending process
- From this analysis develop more precise definitions for the forms and types of mortgage loans to be included and excluded on disclosure statements.

The information obtained in this study provide a good beginning for achieving this objective Extending this analysis by means of the two steps above would make possible the development of explicit criteria for inclusion of loans in disclosure statements. This would eliminate the ambiguities defined above and make the resulting data more meaningful and valuable to all users.

6.3 SUMMARY OF FINDINGS

Three types of findings were derived from the study. First, quantitative estimates of the volume and percentage of lending by various types of lenders were obtained for the nation, and derived for the three counties in the study. Second, some of the major reasons for the variations in the lending patterns among the three counties were determined. Finally, a number of important lessons were learned during the process of acquiring, validating, and processing mortgage loan data in accordance with Regulation C criteria.

The National Pattern of Mortgage Originations: In 1977, over $173 billion in residential mortgage loans were originated in the United States. All depository institutions (i.e., commercial banks, mutual savings banks, and savings and loan associations), both those subject and not subject to disclosure reporting, originated 81.8 percent of this total volume in 1977.

For purposes of analysis, it is useful to compare the national pattern of mortgage loan originations by various types of lenders against the patterns by those same types of lenders in the three counties. Table 6.4 provides a comparison of the percentage of the dollar volume originated by six types of lenders nationally and in the three counties. The percentages for depository institutions shown in Table 6.4 are based upon the combined originations of all institutions and not just those subject to disclosure reporting. Mutual savings banks exist in only 17 states, and in 1977 they held 36 percent of the debt held by depository institutions in these states.

TABLE 6.4: PERCENTAGE OF THE DOLLAR VOLUME OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS BY VARIOUS LENDERS IN 1977

LENDER TYPE	NATIONAL	SAN DIEGO COUNTY	ERIE COUNTY	COOK COUNTY
Commercial Banks	22.1	9.5	19.9	21.4
Mutual Savings Banks	5.9	--	42.5	--
Savings & Loan Associations	53.8	54.7	20.1	68.7
Mortgage Companies	13.5	15.7	9.4	5.3
Miscellaneous Companies	4.7	7.4		1.8
Private Parties		12.7	8.1	2.8
TOTAL	100	100	100	100

Percentage of Originations by Institutions Subject to Disclosure Reporting: Table 6.5 provides a comparison of the dollar volume originated by depository institutions subject to Federal or state disclosure reporting in each of the three counties. The table shows that the percentage of mortgage lending by depository institutions varied from a low of 62.5 percent in San Diego County to a high of 87.9 percent in Cook County. These data for the three counties reflect the degree to which lending by lenders not subject to disclosure reporting need be taken into account when data on overall lending patterns are assessed.

TABLE 6.5: PERCENTAGE OF THE DOLLAR VOLUME OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS IN 1977

	DEPOSITORY INSTITUTIONS SUBJECT TO DISCLOSURE REPORTING	OTHER LENDERS
San Diego County	62.5	37.5
Erie County	81.7	18.3
Cook County	87.9	12.1

Variation in Lending by Depository Institutions: Results from the completeness analysis show that the lending patterns of depository institutions varied considerably among the three counties. The percentage of lending by savings and loan associations, commercial banks, and mutual savings banks subject to Federal or state disclosure reporting, as well as that of other lenders, is shown in Table 6.6. In this table, only data on lenders subject to disclosure reporting is represented.

TABLE 6.6: PERCENTAGE OF THE DOLLAR VOLUME OF RESIDENTIAL MORTGAGE LOAN ORIGINATIONS BY DEPOSITORY INSTITUTIONS SUBJECT TO FEDERAL AND STATE REPORTING

LENDER TYPE	SAN DIEGO COUNTY	ERIE COUNTY	COOK COUNTY
SAVINGS & LOAN ASSOCIATIONS	53.2	19.9	66.9
COMMERCIAL BANKS	9.3	19.3	21.0
MUTUAL SAVINGS BANKS	--	42.5	--
OTHERS	37.5	18.3	12.1

Many factors explain these variations among counties, including:

- The presence of Mutual Savings Banks in Erie County but not San Diego or Cook Counties
- The unusually high demand for commercial and residential mortgages in San Diego and the concomitant preference of banks for commercial and other loans over residential mortgage loans
- The response of mortgage companies in San Diego to the tight money situation.

Impact of Exemptions: The results of the study indicate that the exemptions from disclosure reporting granted to depository institutions in the three SMSAs because of their size or location do not result in a significant omission in disclosure reporting. The mortgage loan originations of depository institutions with assets less than $10 million or with no home or branch office within an SMSA ranged from 0.8 to 2.2 percent of the total dollar volume of mortgage loans that were originated by all depository institutions in each of the three counties. It is important to note, however, that these findings are for three counties only, and thus do not eliminate the possibility that exemptions might have a more significant impact in othar areas.

Lessons Learned in Acquiring and Using Data for the Completeness Analysis: A number of important lessons were learned through the process of acquiring, validating, and processing mortgage loan information for the three counties. These can be summarized under three topics:

- The essential relationship between explicit loan selection criteria and understanding the contents of a mortgage loan data base or report
- The nature and implications of ambiguities in the mortgage loan criteria in Regulation C
- The difficulty of getting mortgage loan information from county offices or title companies matching the mortgage loan information on disclosure statements because of the complexity of the loan selection criteria and the inherent limitations of the criteria codes in title company or county office data.

Finally, a suggestion was made as to the value of developing a descriptive model of mortgage loan transactions, and using these descriptions to develop precise definitions for mortgage loans to be included on disclosure statements.

REFERENCES

1. Federal Reserve Board, Regulation C (12 CFR 203),: effective June 28, 1976.
2. Department of Housing and Urban Development News, "HUD NEWS," June 6, 1978.
3. Report prepared by Phase 1 Contractor, Resource Consultants, Inc., Phoenix, Arizona, delivered March 1979.
4. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three SMSAs, Phase III: Completanees," November 18, 1977.
5. Buffalo Daily Law Journal, published by the Buffalo Daily Law Journal, Inc., Buffalo, New York.
6. Department of Housing and Urban Development, "HUD NEWS," June 6, 1978; Federal Reserve Bulletin.
7. Information in the discussion of lender-types is adapted from Marshall Dennis, Fundamentals of Mortgage Lending (Reston: Reston Publishing Company, Inc., 1978); National Association of Mutual Banks, "National Fact Book of Mutual Savings Banks," October 1978; and Other Sources.
8. Economic Research Bureau of the San Diego Chamber of Commerce, "San Diego Economic Bulletin," Volume 26, May 1978.
9. Interpretation of HMDA obtained from a member of the Federal Reserve Board by a staff member of the Federal Home Loan Bank Board Office of Examinations and Supervision. Information transmitted in phone call to JRB, June 12, 1979.

APPENDIX A

DETAILED COMPLETENESS REPORTS FOR
SAN DIEGO COUNTY

This appendix contains 15 reports showing the volume and percentages of lending by the various lenders in San Diego County. These reports were prepared from the Nationwide data discussed in Chapter 3. These 15 reports provide the following information:

Page	Report	Contents
A-3	A.1	*Volume of Mortgage Lending by All Lenders*
A-4	A.2	*Volume of Mortgage Lending by HMDA Banks*
A-5	A.3	*Volume of Mortgage Lending by Other Banks*
A-6	A.4	*Volume of Mortgage Lending by HMDA S&L's*
A-7	A.5	*Volume of Mortgage Lending by Other S&L's*
A-8	A.6	*Percentage of the Number of Mortgage Loans by All Lenders*
A-9	A.7	*Percentage of the Number of Mortgage Loan by HMDA Banks*
A-10	A.8	*Percentage of the Number of Mortgage Loans by Other Banks*
A-11	A.9	*Percentage of the Number of Mortgage Loans by HMDA S&L's*
A-12	A.10	*Percentage of the Number of Mortgage Loans by Other S&L's*
A-13	A.11	*Percentage of the Amount of Mortgage Loans by All Lenders*
A-14	A.12	*Percentage of the Amount of Mortgage Loans by HMDA Banks*
A-15	A.13	*Percentage of the Amount of Mortgage Loans by Other Banks*
A-16	A.14	*Percentage of the Amount of Mortgage Loans by HMDA S&L's*
A-17	A.15	*Percentage of the Amount of Mortgage Loan by Other S&L's*

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GRAND TOTAL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NOTE: [illegible] 100%. [illegible]

EXHIBIT A.1: Volume of Mortgage Lending by All Lenders

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                                  LENDER/LOAN-TYPE MATRIX                                                    PAGE   2
                            DOLLAR VALUE AND COUNT FOR HMDA BANKS                                            05/29/79

                                              LOAN-TYPES
LENDERS          CONVENTIONAL            FHA                 GI                  VA            STATE CAL VET            TOTAL
-------        $(1000'S)  COUNT   $(1000'S)  COUNT   $(1000'S)  COUNT   $(1000'S)  COUNT   $(1000'S)  COUNT   $(1000'S)  COUNT

B OF AMERICA      48,473    805        385     10          0      0        381      8          0      0     49,240    823
B OF CALIF         4,475    132      9,533    123        447      9      4,583    137          0      0     19,043    401
B OF COMMERCE      3,263     70          0      0          0      0          0      0          0      0      3,263     70
CAL CANADIAN         402      9          0      0          0      0          0      0          0      0        402      9
CAL FIRST         44,123    854      1,442     39          0      0      1,615     33          0      0     47,180    926
CAL HERITAGE          95      3          0      0          0      0          0      0          0      0         95      3
CENTRAL            3,912     60          0      0          0      0          0      0          0      0      3,912     60
CITIZENS 1ST         654     12          0      0          0      0          0      0          0      0        654     12
COMMERCL.            318      6          0      0          0      0          0      0          0      0        318      6
CROCKER NATL      12,432    215          0      0          0      0         99      2          0      0     12,530    217
FIRST NATL         7,952    141          0      0          0      0          0      0          0      0      7,952    141
GROSSMONT          4,749     93          0      0          0      0          0      0          0      0      4,749     93
IMPERIAL [illegible] 344      6          0      0          0      0          0      0          0      0        344      6
LA JOLLA           2,027     33          0      0          0      0          0      0          0      0      2,027     33
LLOYDS BANK          566      4          0      0          0      0          0      0          0      0        566      4
[illegible]          276      5          0      0          0      0          0      0          0      0        276      5
NORTH COUNTY         750     15          0      0          0      0          0      0          0      0        750     15
PENINSULA          2,501     50          0      0          0      0          0      0          0      0      2,501     50
SAN DIEGO [illegible] 17,829 356         81      2         40      1         46      1          0      0     17,996    360
SECURITY PAC      24,291    416        602     16          0      0        565     12          0      0     25,457    444
SOUTHWEST          9,252    170          0      0          0      0          0      0          0      0      9,252    170
SUMITOMO           8,740     72          0      0          0      0          0      0          0      0      8,740     72
UNION BANK         1,438     20         53      1          0      0          0      0          0      0      1,491     21
UNITED CALIF      35,728    589      6,996    154          0      0        557     13          0      0     43,281    756
WELLS FARGO       17,080    208          0      0          0      0          0      0          0      0     17,080    208
WEST COAST           253      9          0      0          0      0          0      0          0      0        253      9
WESTLANDS             35      2          0      0          0      0          0      0          0      0         35      2

HMDA BANKS       254,473  4,475     15,139    305        487     10      9,044    206          0      0    279,144  4,996

NOTE:  DOLLAR VALUES ARE ROUNDED TO NEAREST 1000.  SUMMING PRINTED VALUES MAY NOT EQUAL PRINTED TOTAL.
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REPORT A.2: Volume of Mortgage Lending by HMDA Banks

LENDER/LOAN-TYPE MATRIX
DOLLAR VALUE AND COUNT FOR OTHER BANKS

PAGE 3
05/25/79

LENDERS				LOAN-TYPES							
	CONVENTIONAL		FHA		GI		VA		STATE CAL VET		TOTAL	
-------	$(1000'S)	COUNT	$(1000'S)	COUNT	$(1000'S)	COUNT	$(1000'S)	COUNT	$(1000'S)	COUNT	$(1000'S)	COUNT
[illegible]	30	1	0	0	0	0	0	0	0	0	30	1
AMER CITY BK	113	1	0	0	0	0	0	0	0	0	113	1
B OF A LTVT	573	14	0	0	0	0	0	0	0	0	573	14
B OF IRVINE	154	2	0	0	0	0	0	0	0	0	154	2
CAL FEDERAL	644	12	0	0	0	0	114	2	0	0	758	14
[illegible]	233	3	0	0	0	0	0	0	0	0	233	3
CITIZENS STA	262	6	0	0	0	0	0	0	0	0	262	6
COMMERCIAL	508	7	30	1	0	0	0	0	0	0	538	8
[illegible]	435	5	0	0	0	0	0	0	0	0	435	5
[illegible]	75	1	0	0	0	0	0	0	0	0	75	1
[illegible]	170	1	0	0	0	0	0	0	0	0	170	1
[illegible]	44	1	0	0	0	0	0	0	0	0	44	1
[illegible]	321	2	0	0	0	0	0	0	0	0	324	2
NATL CITY	55	1	0	0	0	0	0	0	0	0	55	1
PACIFIC [illegible]	120	3	0	0	0	0	0	0	0	0	120	3
SANWA	421	7	0	0	0	0	0	0	0	0	421	7
TRANSWORLD	46	1	0	0	0	0	0	0	0	0	46	1
UNION BK	60	1	0	0	0	0	0	0	0	0	60	1
[illegible]	165	3	0	0	0	0	0	0	0	0	165	3
VISTA NATL	24	1	0	0	0	0	0	0	0	0	24	1
OTHER BANKS	4,387	73	30	1	0	0	114	2	0	0	4,530	76

NOTE: DOLLAR VALUES ARE ROUNDED TO NEAREST 1000. SUMMING PRINTED VALUES MAY NOT EQUAL PRINTED TOTAL.

REPORT A.3: Volume of Mortgage Lending by Other Banks

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                                       LENDER/LOAN-TYPE MATRIX                                                          PAGE   4
                                 DOLLAR VALUE AND COUNT FOR HMDA S&LS                                                   09/25/79

                                                              LOAN-TYPES
LENDERS            CONVENTIONAL                 FHA                   GI                    VA               STATE CAL VET              TOTAL
-------          $(1000'S)    COUNT    $(1000'S)    COUNT    $(1000'S)    COUNT    $(1000'S)    COUNT    $(1000'S)    COUNT    $(1000'S)    COUNT

ALLSTATE            10,649      170            0        0            0        0            0        0            0        0       10,649      170
AMERICAN            91,359    1,539            0        0            0        0          261        5            0        0       91,620    1,544
ANAHEIM              6,820      131        1,107       30            0        0        1,206       23            0        0        9,133      184
CAL FEDERAL         78,767    1,391            0        0            0        0            0        0            0        0       78,767    1,391
CENTRAL FED         95,334    1,494            0        0            0        0            0        0            0        0       95,334    1,494
COAST               15,013      259            0        0            0        0            0        0            0        0       15,013      258
DOWNEY              17,331      353       12,427      313            0        0       17,566      363            0        0       47,313    1,029
FIRST FED           32,570      456            0        0            0        0            0        0            0        0       32,570      456
GIBRALTAR           28,811      950            0        0            0        0           87        2            0        0       28,917      952
GLENDALE FED        62,052    1,140            0        0            0        0            0        0            0        0       62,052    1,140
GREAT WEST          91,596    1,653          202        5           43        1        1,389       25            0        0       93,229    1,684
HAWTHORNE              225        4            0        0            0        0            0        0            0        0          228        4
HOME FEDERAL       236,264    4,243       20,202      520            0        0       32,424      663            0        0      288,830    5,426
HOME SAVINGS       126,377    2,103          450       11            0        0        1,668       31            0        0      128,495    2,145
IMPERIAL SAV       114,640    2,306          103        5            0        0          105        5            0        0      114,828    2,316
KEYSTONE               331        8            0        0            0        0            0        0            0        0          331        8
LA JOLLA            35,636      543            0        0            0        0            0        0            0        0       35,636      543
MUTUAL               1,323       27            0        0            0        0            0        0            0        0        1,323       27
OCEANSIDE           40,225    1,026            0        0            0        0            0        0            0        0       80,225    1,026
PALMDALE            24,915      568            0        0            0        0            0        0            0        0       24,915      560
PEOPLES                219        3            0        0            0        0            0        0            0        0          219        3
N SANTA FE          21,297      253            0        0            0        0            0        0            0        0       21,297      253
SAN DIEGO FD       175,517    3,159       10,007      257       25,182      550           44        1            0        0      210,702    3,967
SANTA FE            21,440      420           45        1            0        0            0        0            0        0       21,485      421
SILVER GATE         43,183      909            0        0            0        0            0        0            0        0       43,183      909
STATE MUTUAL        25,998      460            0        0            0        0            0        0            0        0       25,998      460
WORLD SAVING        25,147      385            0        0            0        0          110        2            0        0       25,256      387

HMDA S&L'S       1,461,937   26,152       44,621    1,142       25,225      551       54,930    1,120            0        0    1,588,833   28,965

NOTE:  DOLLAR VALUES ARE ROUNDED TO NEAREST 1000.  SUMMING PRINTED VALUES MAY NOT EQUAL PRINTED TOTAL.
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REPORT A.4: Volume of Mortgage Lending by HMDA S&L's

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                                   LENDER/LOAN-TYPE MATRIX                                                    PAGE  5
                            DOLLAR VALUE AND COUNT FOR OTHER S&LS                                              05/25/79

                                                     LOAN-TYPES
LENDERS           CONVENTIONAL             FHA                 GI                  VA           STATE CAL VET          TOTAL
-------       $(1000'S)   COUNT    $(1000'S)   COUNT    $(1000'S)   COUNT    $(1000'S)   COUNT    $(1000'S)   COUNT    $(1000'S)   COUNT

BEVERLY HILL      5,874     119          0         0           0        0          0        0           0        0       5,874     119
BRENTWOOD           116       3          0         0           0        0          0        0           0        0         116       3
CHULA VISTA       3,953     106          0         0           0        0          0        0           0        0       3,953     106
CITIZENS          3,042      34          0         0           0        0          0        0           0        0       3,042      34
EAST WEST            45       1          0         0           0        0          0        0           0        0          45       1
FALLBROOK            46       1          0         0           0        0          0        0           0        0          46       1
FIDELITY FED        632      11          0         0           0        0          0        0           0        0         632      11
FINANCIAL           293       5          0         0           0        0          0        0           0        0         293       5
HOMESTEAD         1,490      28          0         0           0        0          0        0           0        0       1,490      28
LAGUNA FED        1,115      14          0         0           0        0          0        0           0        0       1,115      14
LINCOLN FED       5,700      76          0         0           0        0          0        0           0        0       5,700      76
LOS ANGELES   [illegible]    20        276         7           0        0         43        1           0        0       1,190      28
MARINERS             77       2          0         0           0        0          0        0           0        0          77       2
MERCURY           1,234      25          0         0           0        0          0        0           0        0       1,234      25
POMONA            1,358      29          0         0           0        0          0        0           0        0       1,358      29
PROGRESSIVE          43       1          0         0           0        0          0        0           0        0          43       1
PROVIDENT           192       3          0         0           0        0          0        0           0        0         192       3
PRUDENTIAL          215       2          0         0           0        0          0        0           0        0         215       2
REPUBLIC            402       9          0         0           0        0          0        0           0        0         402       9
SANTA ANA            49       1          0         0           0        0          0        0           0        0          49       1
SANTA BARB        1,115      17          0         0           0        0          0        0           0        0       1,115      17
SANTA PAULA         201       3          0         0           0        0          0        0           0        0         201       3
SECURITY          3,903      77          0         0           0        0          0        0           0        0       3,903      77
SOUTHERN CAL      3,956     115          0         0           0        0          0        0          59        2       4,015     117
SOUTHEAST           131       2          0         0           0        0          0        0           0        0         131       2
STATE               404       3          0         0           0        0          0        0           0        0         404       3
UNION FED         4,042      47         50         1           0        0          0        0           0        0       4,092      48
US LIFE SAV         187       3          0         0           0        0          0        0           0        0         187       3
VALLEY FIRST         15       1          0         0           0        0          0        0           0        0          15       1
WESTERN FED       4,500      69          0         0           0        0          0        0           0        0       4,500      69

OTHER S&L'S      44,079     947        326         8           0        0         43        1          59        2      44,506     958

NOTE:  DOLLAR VALUES ARE ROUNDED TO NEAREST 1000.  SUMMING PRINTED VALUES MAY NOT EQUAL PRINTED TOTAL.
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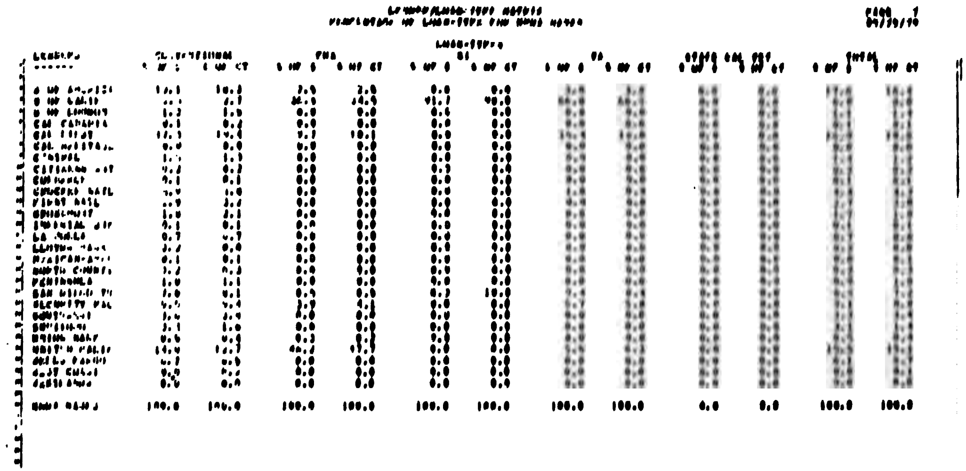
REPORT A.5: Volume of Mortgage Lending by Other S&L's

LENDER/LOAN-TYPE MATRIX
PERCENTAGE OF LOAN-TYPE FOR ALL LENDERS

PAGE 6
05/25/79

LENDERS	CONVENTIONAL		FHA		GI		VA		STATE CAL VET		TOTAL	
-------	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT
COMM BANKS	13.5	9.6	6.0	6.5	1.7	1.0	2.8	2.0	0.0	0.0	9.3	8.4
OTHER BANKS	0.1	0.1	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.1
[illegible] S&L'S	51.0	57.4	20.1	19.0	91.1	93.2	16.0	15.0	0.0	0.0	53.1	49.1
OTHER S&L'S	1.2	1.0	0.1	0.1	0.0	0.0	0.0	0.0	100.0	100.0	1.4	1.4
ESCROW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MORTGAGE	5.4	3.6	56.5	57.3	4.0	4.9	62.0	62.5	0.0	0.0	15.7	17.4
STATE CAL VT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TITLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MISC CO	5.0	5.8	16.2	15.8	0.1	0.1	18.3	17.8	0.0	0.0	7.3	8.2
PRIVATE	1.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.6
SELLER	14.7	17.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	13.3
GRAND TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

REPORT A.6: Percentage of the Number of Mortgage Loans by All Lenders



REPORT A.7: Percentage of the Number of Mortgage Loan by HMDA Banks

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                                          LENDER CONCENTRATION REPORT
                                     PERCENTAGE OF LOAN-TYPES FOR OTHER BANKS                                       05/25/79

                                                     LOAN-TYPES
LENDERS          CONVENTIONAL          FHA                  GI                  VA             STATE CAL VET           TOTAL
-------        % OF $  % OF CT   % OF $  % OF CT    % OF $  % OF CT    % OF $  % OF CT    % OF $  % OF CT    % OF $  % OF CT

ALEX BROWN        0.6     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        0.6     1.3
AMER CITY B       2.5     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        2.4     1.3
B OF A LEVT      13.9    19.1       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0       13.6    18.4
B OF BAVIEC      3.5     2.7       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        3.4     2.6
CAL FEDERAL      16.6    10.4       0.0     0.0        0.0     0.0      100.0   100.0        0.0     0.0       16.0    10.4
CANADIAN BNK      5.3     4.1       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        5.1     3.9
CITIZENS STS      5.9     7.2       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        5.7     7.0
COMMERCIAL       11.4     9.5     100.0   100.0        0.0     0.0        0.0     0.0        0.0     0.0       11.0    10.5
FEDERAL LAND      9.9     6.8       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        9.6     6.5
HOME BANK         1.7     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        1.6     1.3
INDEPENDENCE      3.8     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        3.7     1.3
MANUFACTUR G      1.0     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        0.9     1.3
MECHANICS         7.3     2.7       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        7.1     2.6
NATL CITY         1.2     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        1.2     1.3
PACIFIC CST       2.7     4.1       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        2.6     3.9
SANWA             9.5     9.5       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        9.2     9.2
TRANSWORLD        1.0     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        1.0     1.3
UNION B&D         1.3     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        1.3     1.3
VALLEY NATL       2.3     4.1       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        2.3     3.9
VISTA NATL        0.5     1.3       0.0     0.0        0.0     0.0        0.0     0.0        0.0     0.0        0.5     1.3

OTHER BANKS     100.0   100.0     100.0   100.0        0.0     0.0      100.0   100.0        0.0     0.0      100.0   100.0
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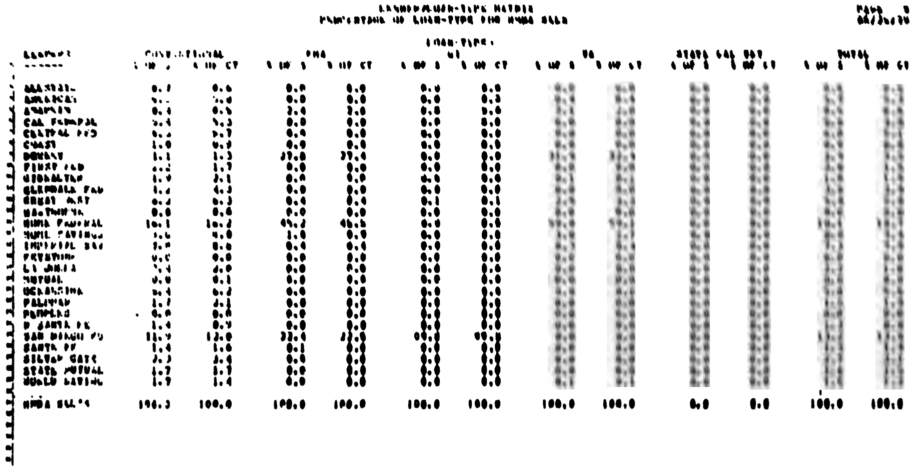
REPORT A.8: Percentage of the Number of Mortgage Loans by Other Banks



LENDER/LOAN-TYPE MATRIX
PERCENTAGE OF LOAN-TYPE FOR HMDA S&LS

PAGE 9
08/20/79

LOAN-TYPE:

LENDER	CONVENTIONAL		FHA		MI		VA		STATE CAL VET		TOTAL	
------	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT
ALLSTATE	0.7	0.6	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AMERICAN	[illegible]	[illegible]	0.0	0.0	0.0	0.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ANAHEIM	0.4	0.5	2.4	2.0	0.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CAL FEDERAL	5.4	5.3	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CENTRAL FED	6.3	5.7	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COAST	1.0	0.9	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DOWNEY	1.1	1.3	27.0	27.4	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
FIRST FED	[illegible]	1.7	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GIBRALTAR	1.9	2.1	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GLENDALE FED	1.4	4.3	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GREAT WEST	0.4	0.3	0.4	0.4	0.1	0.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HAWTHORNE	0.0	0.6	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOME FEDERAL	10.1	10.2	45.2	46.5	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HOME SAVINGS	1.6	4.0	1.0	0.9	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
IMPERIAL SAV	[illegible]	[illegible]	0.4	0.4	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	0.0	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
LA JOLLA	[illegible]	4.0	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MUTUAL	0.0	0.1	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
OCEANSIDE	5.4	6.2	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PALOMAR	1.7	2.1	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
PIONEER	0.0	0.0	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
R SANTA FE	1.4	0.9	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SAN DIEGO FD	11.9	12.0	22.4	22.0	99.9	99.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SANTA [illegible]	1.4	1.6	0.1	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SILVER GATE	2.2	2.5	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
STATE MUTUAL	1.7	1.7	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
WORLD SAVINGS	1.9	1.4	0.0	0.0	0.0	0.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HMDA S&L'S	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0

REPORT A.9: Percentage of the Number of Mortgage Loans by HMDA S&L's

LENDER/LOAN-TYPE MATRIX
PERCENTAGE OF LOAN-TYPE FOR OTHER S&LS

PAGE 10
05/25/79

LOAN-TYPES

LENDERS	CONVENTIONAL % OF $	CONVENTIONAL % OF CT	FHA % OF $	FHA % OF CT	GI % OF $	GI % OF CT	VA % OF $	VA % OF CT	STATE CAL VET % OF $	STATE CAL VET % OF CT	TOTAL % OF $	TOTAL % OF CT
BEVERLY HILLS	13.3	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	13.0
BRENTWOOD	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
CHULA VISTA	8.7	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	12.3
CITIZENS	6.7	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	4.0
EAST WEST	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
FALLBROOK	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
FIDELITY FED	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.2
FINANCIAL	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5
HOMESTEAD	3.3	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.2
LAGUNA FED	2.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.6
LINCOLN FED	13.1	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	8.0
LOS ANGELES	1.9	2.3	82.1	97.6	0.0	0.0	100.0	100.0	0.0	0.0	2.8	3.2
MARINERS	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
MERCURY	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.9
POMONA	3.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.3
PROGRESSIVE	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
PROVIDENT	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3
PRUDENTIAL	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
REPUBLIC	0.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.0
SANTA ANA	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
SANTA BARB	2.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.9
SANTA PAULA	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3
SECURITY	8.7	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.9	8.9
SOUTHERN CAL	4.9	13.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	9.0	13.6
SOUTHWEST	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
STATE	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.3
UNION FED	6.4	5.5	17.9	12.5	0.0	0.0	0.0	0.0	0.0	0.0	6.4	5.5
US LIFE S&L	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3
VALLEY FIRST	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
WESTERN FED	16.2	10.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.1	10.3
OTHER S&L'S	100.0	100.0	100.0	100.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0

REPORT A.10: Percentage of the Number of Mortgage Loans by Other S&L's

LENDER/LOAN-TYPE MATRIX
PERCENTAGE OF LENDER TYPE FOR ALL LENDERS

PAGE 11
05/25/79

LOAN-TYPES

LENDERS	CONVENTIONAL		FHA		GI		VA		STATE CAL VET		TOTAL	
-------	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT
NTNL BANKS	91.0	87.9	5.4	7.7	0.1	0.2	3.5	4.1	0.0	0.0	100.0	100.0
OTHER BANKS	96.6	96.0	0.0	1.3	0.0	0.0	2.5	2.6	0.0	0.0	100.0	100.0
FEDL S&L'S	92.1	90.2	2.9	3.9	1.5	1.9	3.4	3.8	0.0	0.0	100.0	100.0
OTHER S&L'S	99.0	98.7	0.7	0.9	0.0	0.0	0.0	0.1	0.1	0.2	100.0	100.0
ESCROW	72.6	66.6	27.3	33.3	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
MORTGAGE	27.7	24.0	20.6	32.0	9.2	0.2	45.1	42.0	0.0	0.0	100.0	100.0
STATE CAL VT	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
TITLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MISC CO	54.0	55.2	16.4	16.0	0.0	0.0	20.0	25.0	0.0	0.0	100.0	100.0
PRIVATE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
SELLER	99.3	99.2	0.0	0.0	0.0	0.0	0.6	0.7	0.0	0.0	100.0	100.0
GRAND TOTAL	80.3	77.2	7.4	9.7	0.9	1.0	11.4	11.9	0.0	0.0	100.0	100.0

REPORT A.11: Percentage of the Amount of Mortgage Loans by All Lenders

LENDER/LOAN-TYPE MATRIX
PERCENTAGE OF LENDER TYPE FOR HMDA BANKS

PAGE 12
05/25/79

LOAN-TYPES

LENDERS	CONVENTIONAL		FHA		GI		VA		STATE CAL VET		TOTAL	
------	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT
B OF AMERICA	98.6	97.8	0.7	1.2	0.0	0.0	0.7	0.9	0.0	0.0	100.0	100.0
B OF CALIF	34.5	30.4	29.0	33.1	2.3	2.2	34.5	34.1	0.0	0.0	100.0	100.0
B OF LINDON	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CAL CANADIAN	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CAL FIRST	93.4	91.8	3.1	4.7	0.0	0.0	3.4	3.5	0.0	0.0	100.0	100.0
CAL HERITAGE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CENTRAL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CITIZENS NAT	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
COMMERCE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CROCKER NATL	99.3	99.0	0.0	0.0	0.0	0.0	0.7	0.9	0.0	0.0	100.0	100.0
FIRST NATL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
GROSSMONT	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
IMPERIAL BK	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
LA JOLLA	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
LLOYDS BANK	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
MEDICAL-DENTAL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
NORTH COUNTY	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
PENINSULA	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
SAN DIEGO TR	99.2	98.8	0.4	0.5	0.2	0.2	0.2	0.2	0.0	0.0	100.0	100.0
SECURITY PAC	95.5	93.6	2.3	3.6	0.0	0.0	2.2	2.7	0.0	0.0	100.0	100.0
SOUTHWEST	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
SUMITOMO	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
UNION BANK	96.5	95.3	3.5	4.7	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
UNITED CALIF	88.7	71.9	10.1	26.3	0.0	0.0	1.2	1.7	0.0	0.0	100.0	100.0
WELLS FARGO	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
WEST COAST	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
WESTLANDS	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
HMDA BANKS	90.9	87.9	5.4	7.7	0.1	0.2	3.5	4.1	0.0	0.0	100.0	100.0

REPORT A.12: Percentage of the Amount of Mortgage Loans by HMDA Banks

LENDER/LOAN-TYPE MATRIX
PERCENTAGE BY LENDER TYPE FOR OTHER BANKS

PAGE 13
05/25/79

LENDERS	CONVENTIONAL		FHA		GI		VA		STATE CAL VET		TOTAL	
------	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT	% OF $	% OF CT
ALPH FINANC	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
AMER CITY BK	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
B OF A LEVY	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
B OF IRVINE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CAL FEDERAL	[illegible]	85.7	0.0	0.0	0.0	0.0	15.0	14.2	0.0	0.0	100.0	100.0
CANADIAN AM	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CITIZENS STA	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
COMMERCIAL	[illegible]	87.5	7.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
FEDERAL LAND	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
HOME BANK	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
INDEPENDENCE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
MANUFACTURER	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
MECHANICS	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
NATL CITY	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
PACIFIC CST	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
SANWA	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
TRANSWORLD	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
UNION FED	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
VALLEY BANK	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
VISTA CAPL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
OTHER BANKS:	[illegible]	96.0	0.0	1.3	0.0	0.0	2.5	2.6	0.0	0.0	100.0	100.0

REPORT A.13: Percentage of the Amount of Mortgage Loans by Other Banks

LENDER/LOAN-TYPE MATRIX
PERCENTAGE OF LENDER TYPE FOR HMDA S&LS

PAGE 14
05/25/79

LENDERS	LOAN-TYPES CONVENTIONAL % OF $	% OF CT	FHA % OF $	% OF CT	GI % OF $	% OF CT	VA % OF $	% OF CT	STATE CAL VET % OF $	% OF CT	TOTAL % OF $	% OF CT

ALLSTATE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
AMERICAN	99.7	99.6	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	100.0	100.0
ANAHEIM	74.6	71.1	12.1	16.3	0.0	0.0	13.2	12.5	0.0	0.0	100.0	100.0
CAL FEDERAL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
CENTRAL FED	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
COAST	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
DOWNEY	36.6	31.3	26.2	30.4	0.0	0.0	37.1	38.2	0.0	0.0	100.0	100.0
FIRST FED	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
GIBRALTAR	99.7	99.6	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	100.0	100.0
GLENDALE FED	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
GREAT WEST	98.4	98.1	0.2	0.2	0.0	0.0	1.4	1.4	0.0	0.0	100.0	100.0
HAWTHORNE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
HOME FEDERAL	81.7	78.1	6.9	9.5	0.0	0.0	11.2	12.2	0.0	0.0	100.0	100.0
HOME SAVINGS	98.5	98.0	0.3	0.5	0.0	0.0	1.2	1.4	0.0	0.0	100.0	100.0
IMPERIAL SAV	99.6	99.5	0.1	0.2	0.0	0.0	0.1	0.2	0.0	0.0	100.0	100.0
KEYSTONE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
LA JOLLA	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
MUTUAL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
OCEANSIDE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
PALOMAR	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
PEOPLES	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
R SANTA FE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
SAN DIEGO FD	83.2	79.6	4.7	6.4	11.9	13.8	0.0	0.0	0.0	0.0	100.0	100.0
SANTA FE	99.7	99.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
SILVER GATE	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
STATE MUTUAL	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0
WORLD SAVINGS	99.5	99.4	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	100.0	100.0
HMDA S&L'S	92.1	90.2	2.8	3.9	1.5	1.9	3.4	3.8	0.0	0.0	100.0	100.0

REPORT A.14: Percentage of the Amount of Mortgage Loans by HMDA S&L's

APPENDIX B

DETAILED COMPLETENESS REPORTS FOR ERIE COUNTY

dix contains 14 reports showing the volume and percentages the various lenders in San Diego County. These reports were the Buffalo Daily Law Journal data discussed in Chapter 4. provide the following information:

Report	Contents
B.1	*Volume of Lending Within Erie County*
B.2	*Volume of Lending Within Buffalo City Limits*
B.3	*Volume of Lending Within Rest of Erie County*
B.4	*Volume of Lending Within Hamburg*
B.5	*Volume of Lending Within Tonawanda*
B.6	*Volume of Lending Within 48 Localities*
B.7	*Volume of Lending by HMDA Banks*
B.8	*Volume of Lending by Non-HMDA Banks*
B.9	*Volume of Lending by HMDA S&L's*
B.10	*Volume of Lending by Non-HMDA S&L's*
B.11	*Volume of Lending by Miscellaneous Companies*
B.12	*Volume of Lending by Private Parties*
B.13	*Volume of Lending by Buffalo Savings Bank*
B.14	*Volume of Lending by First Federal S&L of Buffalo*

Reports B.4 and B.5 show the volume of lending within the towns of Hamburg and Tonawanda, respectively. These two reports are illustrative of the full set of 48 reports that were produced during the study but not included in this report. Similarly, reports B.13 and B.14 are illustrative of a set of reports that were produced to show the geographic distribution of lending within the county by individual lender.

BUFFALO COMPLETENESS STUDY

PAGE 1
11/27/78

FOR LOCALITY: ERIE COUNTY

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
ALDEN STATE BANK	1,716	76	0.4	0.4
BUFFALO SAVINGS BANK	90,107	3,686	21.1	20.5
BANK OF NEW YORK	6,508	205	1.5	1.1
BANK OF AKRON	865	42	0.2	0.2
BANKERS TRUST COMPANY	432	29	0.1	0.2
CHASE MANHATTAN	374	21	0.1	0.1
CITIBANK-NEW YORK STATE	1,235	49	0.3	0.3
CHEMICAL BANK	217	3	0.1	0.0
CITIZENS CENTRAL BANK	750	41	0.2	0.2
ERIE SAVINGS BANK	40,554	1,639	9.5	9.1
EVANS NATL BANK OF ANGOLA	1,509	107	0.4	0.6
LIBERTY NATL BANK & TRUST	11,786	564	2.8	3.1
LOCKPORT SAVINGS BANK	3,138	84	0.7	0.5
MARINE MIDLAND	28,996	1,324	6.8	7.3
MANUFACTURERS HANOVER	2,021	81	0.5	0.4
MANUFACTURERS AND TRADERS	26,081	848	6.1	4.7
NIAGARA COUNTY SAVINGS	6,093	204	1.4	1.1
WESTERN NEW YORK SAVINGS	40,997	1,671	9.6	9.3
HMDA BANKS	263,289	10,674	61.8	59.2
BANK OF BUFFALO	8	1	0.0	0.0
BANK OF CATTARAUGUS	30	1	0.0	0.0
BANK OF HOLLAND	957	34	0.2	0.2
DOMINION NATIONAL BANK	100	1	0.0	0.0
EVANS NATL BANK & TRUST	43	2	0.0	0.0
FIRST FED SAVINGS BK	3	1	0.0	0.0
FED LAND BANK SPRINGFIELD	560	12	0.1	0.1
FINGER LAKES NATL BANK	15	1	0.0	0.0
FIRST TRUST UNION BANK	80	3	0.0	0.0
LINCOLN 1ST BANK OF ROCH	453	21	0.1	0.1
MONROE SAVINGS BANK	35	1	0.0	0.0
NIAGARA 1ST SAVINGS BANK	116	5	0.0	0.0
STATE BANK OF ALBANY	40	1	0.0	0.0
WYOMING COUNTY BANK	138	3	0.0	0.0
NON-HMDA BANKS	2,578	87	0.6	0.5
ERIE FEDERAL S&L	8,895	316	2.1	1.8
FIRST FED S&L - BUFFALO	5,315	194	1.2	1.0
FIRST FED S&L - HAMBURG	3,655	148	0.9	0.8
FIRST FED S&L - ROCHESTER	26,529	881	6.2	4.9
NIAGARA PERMANENT S&L	21,750	835	5.1	4.6
NIAGARA FIRST S&L	18,565	674	4.4	3.7
HMDA S&L'S	84,709	3,038	19.9	16.9
AKRON SAVINGS AND LOAN	69	4	0.0	0.0
ERIE COUNTY S&L	42	2	0.0	0.0
FILLMORE S&L	966	47	0.2	0.3
NIAGARA FRONTIER BANK	34	2	0.0	0.0
SALAMANCA FEDERAL S&L	14	1	0.0	0.0
NON-HMDA S&L'S	1,125	56	0.3	0.3
MISCELLANEOUS COMPANIES	40,094	2,051	9.4	11.4
PRIVATE PARTIES	34,424	2,115	8.1	11.7
GRAND TOTAL	426,218	18,021	100.0	100.0

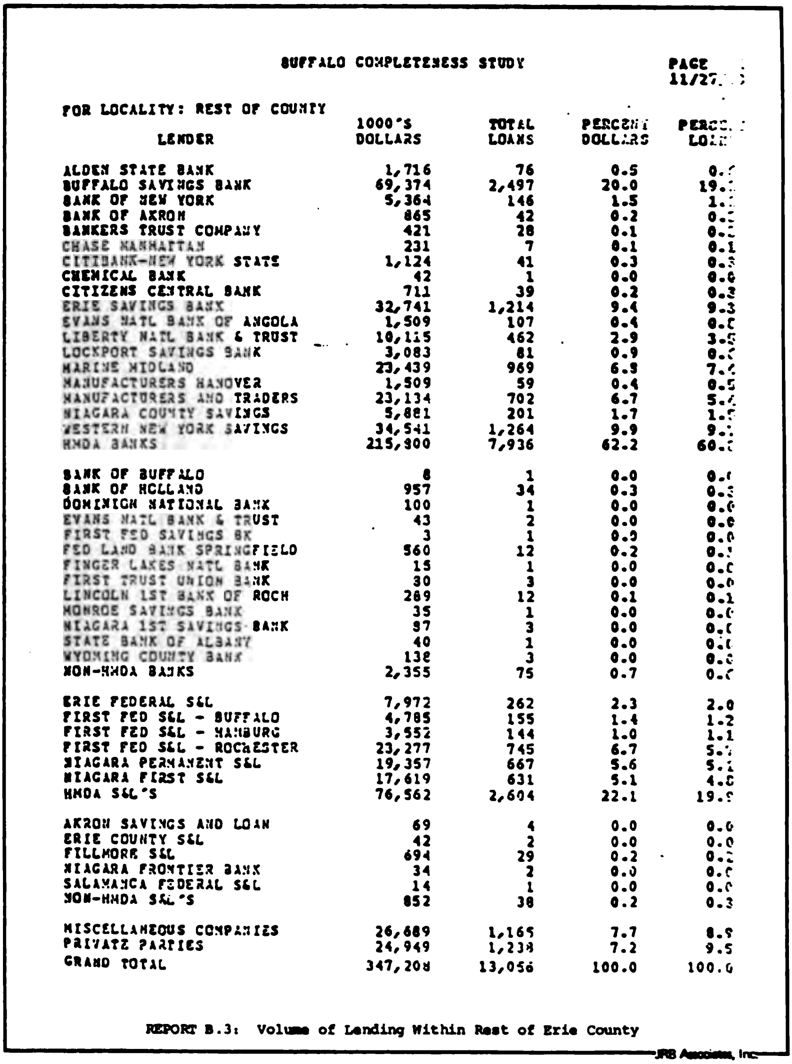
REPORT B.1: Volume of Lending Within Erie County

BUFFALO COMPLETENESS STUDY PAGE 3
11/27/78

FOR LOCALITY: BUFFALO

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO SAVINGS BANK	20,733	1,189	26.2	23.9
BANK OF NEW YORK	1,143	59	1.4	1.2
BANKERS TRUST COMPANY	11	1	0.0	0.0
CHASE MANHATTAN	143	14	0.2	0.3
CITIBANK-NEW YORK STATE	111	8	0.1	0.2
CHEMICAL BANK	175	2	0.2	0.0
CITIZENS CENTRAL BANK	39	2	0.0	0.0
ERIE SAVINGS BANK	7,813	425	9.9	8.6
LIBERTY NATL BANK & TRUST	1,670	102	2.1	2.1
LOCKPORT SAVINGS BANK	55	3	0.1	0.1
MARINE MIDLAND	5,557	355	7.0	7.2
MANUFACTURERS HANOVER	512	22	0.6	0.4
MANUFACTURERS AND TRADERS	2,947	146	3.7	2.9
NIAGARA COUNTY SAVINGS	122	3	0.2	0.1
WESTERN NEW YORK SAVINGS	6,457	407	8.2	8.2
HMDA BANKS	47,489	2,738	60.1	55.1
BANK OF CATTARAUGUS	30	1	0.0	0.0
LINCOLN 1ST BANK OF ROCH	163	9	0.2	0.2
NIAGARA 1ST SAVINGS BANK	29	2	0.0	0.0
NON-HMDA BANKS	223	12	0.3	0.2
ERIE FEDERAL S&L	923	54	1.2	1.1
FIRST FED S&L - BUFFALO	530	29	0.7	0.6
FIRST FED S&L - HAMBURG	103	4	0.1	0.1
FIRST FED S&L - ROCHESTER	3,252	136	4.1	2.7
NIAGARA PERMANENT S&L	2,393	168	3.0	3.4
NIAGARA FIRST S&L	945	45	1.2	0.9
HMDA S&L'S	8,147	434	10.3	8.7
FILLMORE S&L	273	18	0.3	0.4
NON-HMDA S&L'S	273	18	0.3	0.4
MISCELLANEOUS COMPANIES	13,405	886	17.0	17.8
PRIVATE PARTIES	9,475	877	12.0	17.7
GRAND TOTAL	79,011	4,965	100.0	100.0

REPORT B.2: Volume of Lending Within Buffalo City Limits



BUFFALO COMPLETENESS STUDY

PAGE
11/27.

FOR LOCALITY: REST OF COUNTY

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERC LO
ALDEN STATE BANK	1,716	76	0.5	0.
BUFFALO SAVINGS BANK	69,374	2,497	20.0	19.
BANK OF NEW YORK	5,364	146	1.5	1.
BANK OF AKRON	865	42	0.2	0.
BANKERS TRUST COMPANY	421	28	0.1	0.
CHASE MANHATTAN	231	7	0.1	0.1
CITIBANK-NEW YORK STATE	1,124	41	0.3	0.
CHEMICAL BANK	42	1	0.0	0.0
CITIZENS CENTRAL BANK	711	39	0.2	0.3
ERIE SAVINGS BANK	32,741	1,214	9.4	9.3
EVANS NATL BANK OF ANGOLA	1,509	107	0.4	0.
LIBERTY NATL BANK & TRUST	10,115	462	2.9	3.
LOCKPORT SAVINGS BANK	3,083	81	0.9	0.
MARINE MIDLAND	23,439	969	6.8	7.
MANUFACTURERS HANOVER	1,509	59	0.4	0.5
MANUFACTURERS AND TRADERS	23,134	702	6.7	5.
NIAGARA COUNTY SAVINGS	5,881	201	1.7	1.
WESTERN NEW YORK SAVINGS	34,541	1,264	9.9	9.
HMDA BANKS	215,800	7,936	62.2	60.
BANK OF BUFFALO	8	1	0.0	0.
BANK OF HOLLAND	957	34	0.3	0.
DOMINION NATIONAL BANK	100	1	0.0	0.
EVANS NATL BANK & TRUST	43	2	0.0	0.
FIRST FED SAVINGS BK	3	1	0.0	0.
FED LAND BANK SPRINGFIELD	560	12	0.2	0.
FINGER LAKES NATL BANK	15	1	0.0	0.
FIRST TRUST UNION BANK	30	3	0.0	0.
LINCOLN 1ST BANK OF ROCH	289	12	0.1	0.1
MONROE SAVINGS BANK	35	1	0.0	0.
NIAGARA 1ST SAVINGS BANK	97	3	0.0	0.
STATE BANK OF ALBANY	40	1	0.0	0.
WYOMING COUNTY BANK	138	3	0.0	0.
NON-HMDA BANKS	2,355	75	0.7	0.
ERIE FEDERAL S&L	7,972	262	2.3	2.0
FIRST FED S&L - BUFFALO	4,785	155	1.4	1.2
FIRST FED S&L - HAMBURG	3,552	144	1.0	1.1
FIRST FED S&L - ROCHESTER	23,277	745	6.7	5.
NIAGARA PERMANENT S&L	19,357	667	5.6	5.
NIAGARA FIRST S&L	17,619	631	5.1	4.
HMDA S&L'S	76,562	2,604	22.1	19.
AKRON SAVINGS AND LOAN	69	4	0.0	0.
ERIE COUNTY S&L	42	2	0.0	0.0
FILLMORE S&L	694	29	0.2	0.
NIAGARA FRONTIER BANK	34	2	0.0	0.
SALAMANCA FEDERAL S&L	14	1	0.0	0.
NON-HMDA S&L'S	852	38	0.2	0.3
MISCELLANEOUS COMPANIES	26,689	1,165	7.7	8.
PRIVATE PARTIES	24,949	1,238	7.2	9.5
GRAND TOTAL	347,208	13,056	100.0	100.0

REPORT B.3: Volume of Lending Within Rest of Erie County

JRB Associates, Inc.

BUFFALO COMPLETENESS STUDY

PAGE 33
11/27/78

FOR LOCALITY: HAMBURG

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO SAVINGS BANK	5,166	187	17.2	16.4
BANK OF NEW YORK	298	12	1.0	1.1
BANKERS TRUST COMPANY	17	1	0.1	0.1
CHASE MANHATTAN	2	1	0.0	0.1
CITIBANK-NEW YORK STATE	72	4	0.2	0.4
ERIE SAVINGS BANK	3,496	138	11.7	12.1
EVANS NATL BANK OF ANGOLA	78	6	0.3	0.5
LIBERTY NATL BANK & TRUST	890	38	3.0	3.3
MARINE MIDLAND	1,915	87	6.4	7.6
MANUFACTURERS HANOVER	25	1	0.1	0.1
MANUFACTURERS AND TRADERS	3,813	115	12.7	10.1
WESTERN NEW YORK SAVINGS	2,830	102	9.5	8.9
HMDA BANKS	18,609	692	62.1	60.6
LINCOLN 1ST BANK OF ROCH	55	2	0.2	0.2
NON-HMDA BANKS	55	2	0.2	0.2
ERIE FEDERAL S&L	409	14	1.4	1.2
FIRST FED S&L - BUFFALO	176	7	0.6	0.6
FIRST FED S&L - HAMBURG	1,817	74	6.1	6.5
FIRST FED S&L - ROCHESTER	1,297	43	4.3	3.8
NIAGARA PERMANENT S&L	1,751	73	5.8	6.4
NIAGARA FIRST S&L	282	7	0.9	0.6
HMDA S&L'S	5,732	218	19.1	19.1
ERIE COUNTY S&L	35	1	0.1	0.1
FILLMORE S&L	97	3	0.3	0.3
NIAGARA FRONTIER BANK	25	1	0.1	0.1
NON-HMDA S&L'S	157	5	0.5	0.4
MISCELLANEOUS COMPANIES	3,810	136	12.7	11.9
PRIVATE PARTIES	1,601	88	5.3	7.7
GRAND TOTAL	29,963	1,141	100.0	100.0

REPORT B.4: Volume of Lending Within Hamburg

BUFFALO COMPLETENESS STUDY

PAGE
11/27

FOR LOCALITY: REST OF COUNTY

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
ALDEN STATE BANK	1,716	76	0.5	0.6
BUFFALO SAVINGS BANK	69,374	2,497	20.0	19.1
BANK OF NEW YORK	5,364	146	1.5	1.1
BANK OF AKRON	865	42	0.2	0.3
BANKERS TRUST COMPANY	421	28	0.1	0.2
CHASE MANHATTAN	231	7	0.1	0.1
CITIBANK-NEW YORK STATE	1,124	41	0.3	0.3
CHEMICAL BANK	42	1	0.0	0.0
CITIZENS CENTRAL BANK	711	39	0.2	0.3
ERIE SAVINGS BANK	32,741	1,214	9.4	9.3
EVANS NATL BANK OF ANGOLA	1,509	107	0.4	0.8
LIBERTY NATL BANK & TRUST	10,115	462	2.9	3.5
LOCKPORT SAVINGS BANK	3,083	81	0.9	0.6
MARINE MIDLAND	23,439	969	6.8	7.4
MANUFACTURERS HANOVER	1,509	59	0.4	0.5
MANUFACTURERS AND TRADERS	23,134	702	6.7	5.4
NIAGARA COUNTY SAVINGS	5,881	201	1.7	1.5
WESTERN NEW YORK SAVINGS	34,541	1,264	9.9	9.7
HMDA BANKS	215,900	7,936	62.2	60.8
BANK OF BUFFALO	8	1	0.0	0.0
BANK OF HOLLAND	957	34	0.3	0.3
DOMINION NATIONAL BANK	100	1	0.0	0.0
EVANS NATL BANK & TRUST	43	2	0.0	0.0
FIRST FED SAVINGS BK	3	1	0.0	0.0
FED LAND BANK SPRINGFIELD	560	12	0.2	0.1
FINGER LAKES NATL BANK	15	1	0.0	0.0
FIRST TRUST UNION BANK	30	3	0.0	0.0
LINCOLN 1ST BANK OF ROCH	289	12	0.1	0.1
MONROE SAVINGS BANK	35	1	0.0	0.0
NIAGARA 1ST SAVINGS BANK	97	3	0.0	0.0
STATE BANK OF ALBANY	40	1	0.0	0.0
WYOMING COUNTY BANK	138	3	0.0	0.0
NON-HMDA BANKS	2,355	75	0.7	0.6
ERIE FEDERAL S&L	7,972	262	2.3	2.0
FIRST FED S&L - BUFFALO	4,785	155	1.4	1.2
FIRST FED S&L - HAMBURG	3,552	144	1.0	1.1
FIRST FED S&L - ROCHESTER	23,277	745	6.7	5.7
NIAGARA PERMANENT S&L	19,357	667	5.6	5.1
NIAGARA FIRST S&L	17,619	631	5.1	4.8
HMDA S&L'S	76,562	2,604	22.1	19.9
AKRON SAVINGS AND LOAN	69	4	0.0	0.0
ERIE COUNTY S&L	42	2	0.0	0.0
FILLMORE S&L	694	29	0.2	0.2
NIAGARA FRONTIER BANK	34	2	0.0	0.0
SALAMANCA FEDERAL S&L	14	1	0.0	0.0
NON-HMDA S&L'S	852	38	0.2	0.3
MISCELLANEOUS COMPANIES	26,689	1,165	7.7	8.9
PRIVATE PARTIES	24,949	1,238	7.2	9.5
GRAND TOTAL	347,208	13,056	100.0	100.0

REPORT B.3: Volume of Lending Within Rest of Erie County

BUFFALO COMPLETENESS STUDY

PAGE 33
11/27/78

FOR LOCALITY: HAMBURG

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO SAVINGS BANK	5,166	187	17.2	16.4
BANK OF NEW YORK	298	12	1.0	1.1
BANKERS TRUST COMPANY	17	1	0.1	0.1
CHASE MANHATTAN	2	1	0.0	0.1
CITIBANK-NEW YORK STATE	72	4	0.2	0.4
ERIE SAVINGS BANK	3,496	138	11.7	12.1
EVANS NATL BANK OF ANGOLA	78	6	0.3	0.5
LIBERTY NATL BANK & TRUST	890	38	3.0	3.3
MARINE MIDLAND	1,915	87	6.4	7.6
MANUFACTURERS HANOVER	25	1	0.1	0.1
MANUFACTURERS AND TRADERS	3,813	115	12.7	10.1
WESTERN NEW YORK SAVINGS	2,838	102	9.5	8.9
HMDA BANKS	18,609	692	62.1	60.6
LINCOLN 1ST BANK OF ROCH	55	2	0.2	0.2
NON-HMDA BANKS	55	2	0.2	0.2
ERIE FEDERAL S&L	409	14	1.4	1.2
FIRST FED S&L - BUFFALO	176	7	0.6	0.6
FIRST FED S&L - HAMBURG	1,817	74	6.1	6.5
FIRST FED S&L - ROCHESTER	1,297	43	4.3	3.8
NIAGARA PERMANENT S&L	1,751	73	5.8	6.4
NIAGARA FIRST S&L	282	7	0.9	0.6
HMDA S&L'S	5,732	218	19.1	19.1
ERIE COUNTY S&L	35	1	0.1	0.1
FILLMORE S&L	97	3	0.3	0.3
NIAGARA FRONTIER BANK	25	1	0.1	0.1
NON-HMDA S&L'S	157	5	0.5	0.4
MISCELLANEOUS COMPANIES	3,810	136	12.7	11.9
PRIVATE PARTIES	1,601	88	5.3	7.7
GRAND TOTAL	29,963	1,141	100.0	100.0

REPORT B.4: Volume of Lending Within Hamburg

BUFFALO COMPLETENESS STUDY PAGE 60
11/27/78

FOR LOCALITY: TONAWANDA

LENDER	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO SAVINGS BANK	11,829	479	25.4	24.1
BANK OF NEW YORK	705	20	1.5	1.0
BANKERS TRUST COMPANY	20	5	0.0	0.3
CHASE MANHATTAN	30	1	0.1	0.1
CITIBANK-NEW YORK STATE	35	3	0.1	0.2
ERIE SAVINGS BANK	4,824	197	10.4	9.9
LIBERTY NATL BANK & TRUST	779	48	1.7	2.4
LOCKPORT SAVINGS BANK	50	1	0.1	0.1
MARINE MIDLAND	2,551	129	5.5	6.5
MANUFACTURERS HANOVER	104	11	0.2	0.6
MANUFACTURERS AND TRADERS	1,516	58	3.3	2.9
NIAGARA COUNTY SAVINGS	2,367	91	5.1	4.6
WESTERN NEW YORK SAVINGS	3,997	167	8.6	8.4
HMDA BANKS	28,809	1,209	61.9	61.1
NIAGARA 1ST SAVINGS BANK	54	2	0.1	0.1
NON-HMDA BANKS	54	2	0.1	0.1
ERIE FEDERAL S&L	250	9	0.5	0.5
FIRST FED S&L - BUFFALO	353	16	0.8	0.8
FIRST FED S&L - ROCHESTER	3,150	113	6.8	5.7
NIAGARA PERMANENT S&L	1,590	68	3.4	3.4
NIAGARA FIRST S&L	6,618	291	14.2	14.7
HMDA S&L'S	11,962	497	25.7	25.1
MISCELLANEOUS COMPANIES	2,963	134	6.4	6.8
PRIVATE PARTIES	2,758	138	5.9	7.0
GRAND TOTAL	46,545	1,980	100.0	100.0

REPORT B.5: Volume of Lending Within Tonawanda

BUFFALO COMPLETENESS STUDY

PAGE 1
12/05/78

FOR LENDER: GRAND TOTAL

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	79,011	4,965	100.0	100.0
REST OF COUNTY	347,208	13,056	100.0	100.0
AKRON	372	13	100.0	100.0
ALDEN	3,827	155	100.0	100.0
AMHERST	78,901	2,470	100.0	100.0
ANGOLA	336	17	100.0	100.0
AURORA	9,155	308	100.0	100.0
BRANT	942	50	100.0	100.0
BOSTON	4,025	157	100.0	100.0
BLASDELL	406	15	100.0	100.0
CHEEKTOWAGA	40,838	1,714	100.0	100.0
CLARENCE	13,487	440	100.0	100.0
COLDEN	1,604	81	100.0	100.0
COLLINS	1,403	71	100.0	100.0
CONCORD	4,263	133	100.0	100.0
DEPEW	1,175	48	100.0	100.0
DERBY	759	28	100.0	100.0
DARIEN	60	2	100.0	100.0
EAST AURORA	788	25	100.0	100.0
EDEN	3,039	122	100.0	100.0
EGGERTSVILLE	83	3	100.0	100.0
ELMA	6,417	213	100.0	100.0
EVANS	8,931	470	100.0	100.0
FRANKLINVILLE	22	1	100.0	100.0
GLENWOOD	14	1	100.0	100.0
GRAND ISLAND	13,324	475	100.0	100.0
HAMBURG	29,963	1,141	100.0	100.0
HOLLAND	1,884	91	100.0	100.0
HOLLYWOOD	20	1	100.0	100.0
IRVING	2	1	100.0	100.0
KENMORE	653	32	100.0	100.0
LACKAWANNA	3,480	185	100.0	100.0
LANCASTER	10,921	453	100.0	100.0
LAKEVIEW	58	3	100.0	100.0
MARILLA	2,984	104	100.0	100.0
NEWSTEAD	3,235	140	100.0	100.0
NORTH COLLINS	1,377	75	100.0	100.0
ORCHARD PARK	17,120	359	100.0	100.0
POLAND	15	1	100.0	100.0
SARDINIA	1,957	78	100.0	100.0
SENECA	45	1	100.0	100.0
SLOAN	117	7	100.0	100.0
SPRINGVILLE	118	5	100.0	100.0
SNYDER	461	16	100.0	100.0
TONAWANDA	46,545	1,930	100.0	100.0
WALES	1,394	51	100.0	100.0
W FALLS	19	1	100.0	100.0
WEST SENECA	23,610	390	100.0	100.0
WILLIAMSVILLE	2,290	68	100.0	100.0
OTHER	2,749	111	100.0	100.0
ERIE COUNTY	426,219	18,021	100.0	100.0

REPORT B.6: Volume of Lending Within 48 Localities

BUFFALO COMPLETENESS STUDY

PAGE 2
12/05/78

FOR LENDER: HMDA BANKS

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	47,489	2,738	60.1	55.1
REST OF COUNTY	215,800	7,936	62.2	60.9
AKRON	323	11	88.3	84.6
ALDEN	2,538	106	66.3	64.2
AMHERST	49,417	1,507	62.7	61.0
ANGOLA	211	11	63.0	64.7
AURORA	5,946	292	64.9	55.6
BRANT	612	27	65.0	54.0
BOSTON	2,191	75	54.4	47.8
BLASDELL	281	9	69.3	60.0
CHEEKTOWAGA	25,876	1,095	63.4	63.9
CLARENCE	7,202	227	53.4	51.6
COLDEN	727	38	45.3	46.9
COLLINS	428	23	30.5	32.4
CONCORD	2,415	99	56.7	54.1
DEPEW	739	31	62.9	64.6
DERBY	119	4	15.7	14.3
DARIEN	30	1	60.0	50.0
EAST AURORA	565	18	71.7	72.0
EDEN	1,576	59	51.0	48.4
EGGERTSVILLE	49	2	58.9	65.7
ELMA	4,707	146	73.4	68.5
EVANS	4,945	266	55.4	56.5
GLENWOOD	14	1	100.0	100.0
GRAND ISLAND	7,619	271	57.2	57.1
HAMBURG	18,609	392	52.1	60.5
HOLLAND	813	35	43.1	43.2
HOLMWOOD	20	1	100.0	100.0
KENMORE	526	25	80.5	78.1
LACKAWANNA	2,044	103	53.7	55.7
LANCASTER	6,879	237	63.0	63.4
LAKEVIEW	42	1	72.4	33.3
MARILLA	1,944	63	65.1	63.6
NEWSTEAD	1,815	54	55.5	60.0
NORTH COLLINS	819	43	59.5	57.3
ORCHARD PARK	13,493	376	70.6	67.3
POLAND	15	1	100.0	100.0
SARDINIA	944	38	49.2	48.7
SENECA	45	1	100.0	100.0
SLOAN	113	6	97.0	85.7
SPRINGVILLE	118	5	100.0	100.0
SNYDER	322	11	70.3	68.8
TONAWANDA	28,309	1,209	61.7	61.1
WALES	1,017	36	73.0	70.6
W FALLS	19	1	100.0	100.0
WEST SENECA	15,771	599	55.3	65.2
WILLIAMSVILLE	1,431	42	62.5	61.8
OTHER	1,627	53	59.2	52.3
ERIE COUNTY	263,289	10,674	61.8	59.2

REPORT B.7: Volume of Lending by HMDA Banks

BUFFALO COMPLETENESS STUDY

PAGE 3
12/05/79

FOR LEADERS NON-HMDA BANKS

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	223	12	0.3	0.2
REST OF COUNTY	2,355	75	8.7	8.6
AMHERST	100	3	0.1	0.1
CHEEKTOWAGA	112	5	0.3	0.3
COLDEN	280	5	16.2	6.2
COLLINS	42	2	3.0	2.8
CONCORD	150	4	3.5	2.2
DARIEN	20	1	40.0	50.0
EDEN	150	2	4.9	1.6
EVANS	215	7	2.4	1.5
FRANKLINVILLE	22	1	100.0	100.0
GRAND ISLAND	8	1	0.1	0.2
HAMBURG	55	2	0.2	0.2
HOLLAND	652	25	34.5	30.9
LACKAWANNA	23	1	0.5	0.5
NEWSTEAD	211	3	6.5	2.1
ORCHARD PARK	76	2	0.4	0.4
SARDINIA	149	6	7.5	7.7
TONAWANDA	54	2	0.1	0.1
WALES	25	1	1.9	2.9
WEST SENECA	29	1	0.1	0.1
WILLIAMSVILLE	3	1	0.1	1.5
ERIE COUNTY	2,578	87	0.6	0.5

REPORT B.8: Volume of Lending by Non-HMDA Banks

BUFFALO COMPLETENESS STUDY

PAGE 4
12/05/78

FOR LENDER: HMDA S&L'S

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	8,147	434	10.3	8.7
REST OF COUNTY	76,562	2,604	22.1	19.9
AKRON	29	1	7.7	7.7
ALDEN	527	21	13.8	12.7
AMHERST	21,231	608	26.9	24.6
ANGOLA	35	2	10.4	11.9
AURORA	1,269	37	13.9	12.0
BRANT	61	4	6.5	8.0
BOSTON	1,196	46	29.7	29.3
BLASDELL	77	4	18.9	26.7
CHEEKTOWAGA	9,278	325	22.7	19.0
CLARENCE	3,883	112	28.9	25.5
COLDEN	228	9	14.2	11.1
COLLINS	367	16	26.1	22.5
CONCORD	421	18	9.9	9.8
DEPEW	250	10	21.3	20.8
DERBY	127	5	16.7	17.9
EAST AURORA	140	5	17.3	20.0
EDEN	782	29	25.3	23.9
EGGERTSVILLE	34	1	41.1	33.3
ELMA	713	22	11.1	10.3
EVANS	836	41	10.0	9.7
GRAND ISLAND	4,300	133	32.3	28.0
HAMBURG	5,742	218	19.1	19.1
HOLLAND	144	5	7.7	6.2
KENMORE	23	3	3.5	9.4
LACKAWANNA	533	23	15.3	12.4
LANCASTER	1,901	71	17.4	15.7
LAKEVIEW	16	2	27.5	66.7
MARILLA	713	24	23.0	23.1
NEWSTEAD	290	11	9.0	7.9
NORTH COLLINS	115	7	8.3	9.3
ORCHARD PARK	3,441	90	18.0	16.1
SARDINIA	24	1	1.2	1.3
SNYDER	104	4	22.5	25.0
TONAWANDA	11,952	497	25.7	25.1
WALES	216	7	15.9	13.7
WEST SENECA	4,032	144	17.1	15.2
WILLIAMSVILLE	747	21	32.5	30.9
OTHER	729	27	25.5	24.3
ERIE COUNTY	84,709	3,038	19.9	16.9

REPORT B.9: Volume of Lending by HMDA S&L's

BUFFALO COMPLETENESS STUDY

PAGE 5
12/05/78

FOR LENDER: NON-HMDA S&L'S

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	273	18	0.3	0.4
REST OF COUNTY	852	38	0.2	0.3
AMHERST	25	2	0.0	0.1
CHEEKTOWAGA	259	11	0.6	0.6
CLARENCE	5	1	0.0	0.2
CONCORD	14	1	0.3	0.5
GRAND ISLAND	22	1	0.2	0.2
HAMBURG	157	5	0.5	0.4
LACKAWANNA	25	1	0.7	0.5
LANCASTER	88	3	0.9	0.7
NEWSTEAD	69	4	2.1	2.9
ORCHARD PARK	54	3	0.3	0.5
WEST SENECA	135	6	0.5	0.7
ERIE COUNTY	1,125	56	0.3	0.3

REPORT B.10: Volume of Lending by Non-HMDA S&L's

BUFFALO COMPLETENESS STUDY

PAGE 51
12/05/78

FOR LENDER: MISCELLANEOUS COMPANIES

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	13,405	886	17.0	17.3
REST OF COUNTY	26,689	1,165	7.7	8.9
ALDEN	440	21	11.5	12.7
AMHERST	4,637	194	5.9	7.9
ANGOLA	85	3	25.2	17.6
AURORA	611	26	6.7	8.4
BRANT	51	6	5.5	12.0
BOSTON	307	11	7.5	7.0
BLASDELL	33	1	8.1	6.7
CHEEKTOWAGA	2,941	147	7.2	8.5
CLARENCE	750	39	5.8	8.9
COLDEN	131	9	9.2	11.1
COLLINS	249	11	17.3	15.5
CONCORD	286	15	6.7	8.2
DEPEW	135	7	15.3	14.6
DERBY	514	19	67.5	67.9
EAST AURORA	33	1	4.2	4.0
EDEN	182	9	5.9	7.4
ELMA	393	15	6.1	7.0
EVANS	2,078	94	23.0	20.0
GRAND ISLAND	653	28	4.9	5.9
HAMBURG	3,810	136	12.7	11.9
HOLLAND	79	4	4.2	4.9
KENMORE	104	4	16.0	12.5
LACKAWANNA	378	22	10.9	11.9
LANCASTER	715	36	6.5	7.9
MARILLA	32	5	2.3	4.3
NEWSTEAD	233	11	7.3	7.9
NORTH COLLINS	166	10	12.0	13.3
ORCHARD PARK	790	34	4.1	6.1
SARDINIA	406	14	20.8	17.9
SNYDER	34	1	7.1	6.3
TONAWANDA	2,963	134	5.4	5.9
WALES	51	2	3.7	3.9
WEST SENECA	1,920	78	3.1	8.8
WILLIAMSVILLE	36	3	3.7	4.4
OTHER	233	15	10.3	13.5
ERIE COUNTY	40,094	2,051	9.4	11.4

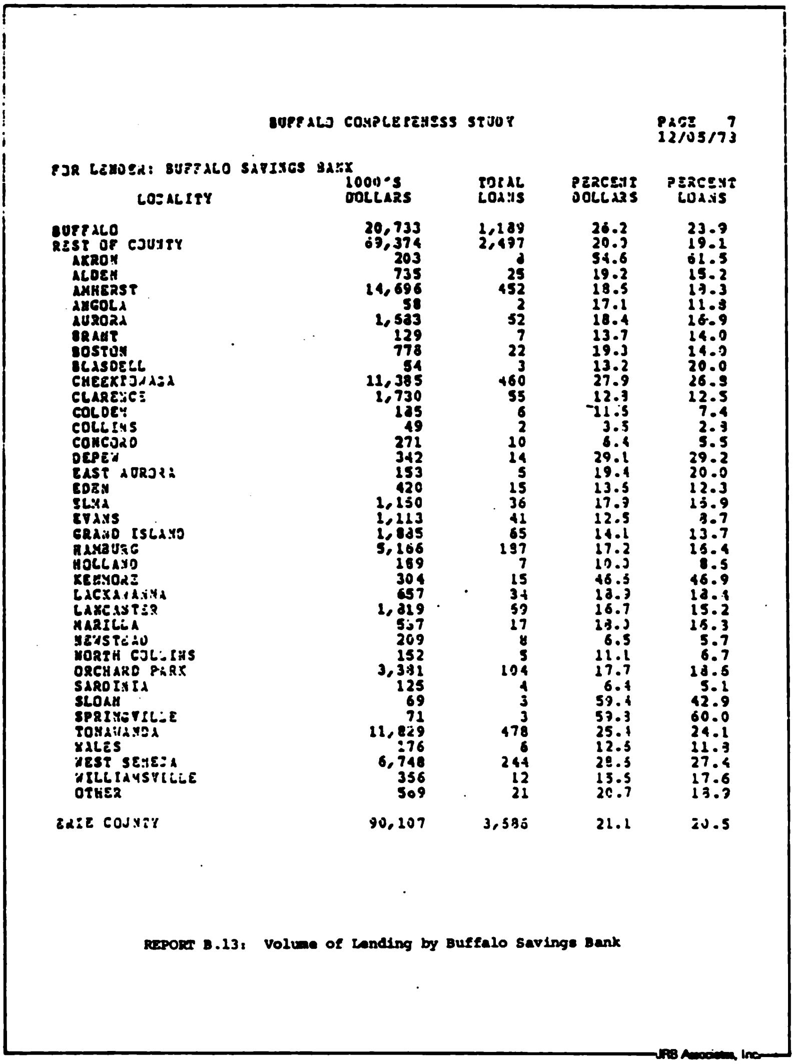
REPORT B.11: Volume of Lending by Miscellaneous Companies

BUFFALO COMPLETENESS STUDY PAGE 62
12/05/7[illegible]

FOR LENDER: PRIVATE PARTIES

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	9,475	877	12.0	17.7
REST OF COUNTY	24,949	1,238	7.2	9.5
AKRON	15	1	4.0	7.7
ALDEN	323	17	8.4	10.3
AMHERST	3,463	156	4.4	6.3
ANGOLA	5	1	1.5	5.9
AURORA	1,329	43	14.5	14.0
BRANT	217	13	23.0	26.0
BOSTON	331	25	8.2	15.9
BLASDELL	15	1	3.7	6.7
CHEEKTOWAGA	2,373	131	5.8	7.6
CLARENCE	1,617	61	12.0	13.9
COLDEN	258	20	16.1	24.7
COLLINS	318	19	22.6	26.8
CONCORD	978	46	22.9	25.1
EAST AURORA	50	1	5.3	4.0
EDEN	359	23	12.9	18.9
ELMA	604	30	9.4	14.1
EVANS	797	62	8.9	13.2
GRAND ISLAND	722	41	5.4	8.6
HAMBURG	1,601	88	5.3	7.7
HOLLAND	197	12	10.4	14.8
IRVING	2	1	100.0	100.0
LACKAWANNA	479	35	13.3	18.9
LANCASTER	1,318	56	12.3	12.4
MARILLA	245	12	8.2	11.5
NEWSTEAD	388	27	18.4	19.3
NORTH COLLINS	278	15	20.2	20.0
ORCHARD PARK	1,266	54	6.5	9.7
SARDINIA	434	19	22.2	24.4
SLOAN	4	1	3.0	14.3
TONAWANDA	2,758	138	5.9	7.0
WALES	85	5	5.1	9.3
WEST SENECA	1,731	72	7.3	8.1
WILLIAMSVILLE	23	1	1.0	1.5
OTHER	109	11	4.0	9.9
ERIE COUNTY	34,424	2,115	8.1	11.7

REPORT B.12: Volume of Lending by Private Parties



BUFFALO COMPLETENESS STUDY PAGE 7
12/05/73

FOR LENDER: BUFFALO SAVINGS BANK

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	20,733	1,189	26.2	23.9
REST OF COUNTY	69,374	2,497	20.0	19.1
AKRON	203	8	54.6	61.5
ALDEN	735	25	19.2	15.2
AMHERST	14,696	452	18.5	18.3
ANGOLA	58	2	17.1	11.8
AURORA	1,583	52	18.4	16.9
BRANT	129	7	13.7	14.0
BOSTON	778	22	19.3	14.0
BLASDELL	54	3	13.2	20.0
CHEEKTOWAGA	11,385	460	27.9	26.8
CLARENCE	1,730	55	12.8	12.5
COLDEN	185	6	11.5	7.4
COLLINS	49	2	3.5	2.9
CONCORD	271	10	6.4	5.5
DEPEW	342	14	29.1	29.2
EAST AURORA	153	5	19.4	20.0
EDEN	420	15	13.5	12.3
ELMA	1,150	36	17.9	15.9
EVANS	1,113	41	12.5	8.7
GRAND ISLAND	1,885	65	14.1	13.7
HAMBURG	5,166	197	17.2	16.4
HOLLAND	169	7	10.0	8.5
KENMORE	304	15	46.5	46.9
LACKAWANNA	657	34	18.9	18.4
LANCASTER	1,819	59	16.7	15.2
MARILLA	537	17	18.0	16.3
NEWSTEAD	209	8	6.5	5.7
NORTH COLLINS	152	5	11.1	6.7
ORCHARD PARK	3,381	104	17.7	18.6
SARDINIA	125	4	6.4	5.1
SLOAN	69	3	59.4	42.9
SPRINGVILLE	71	3	59.3	60.0
TONAWANDA	11,829	478	25.4	24.1
WALES	276	6	12.5	11.8
WEST SENECA	6,748	244	28.5	27.4
WILLIAMSVILLE	356	12	15.5	17.6
OTHER	509	21	20.7	13.9
ERIE COUNTY	90,107	3,586	21.1	20.5

REPORT B.13: Volume of Lending by Buffalo Savings Bank

JRB Associates, Inc.

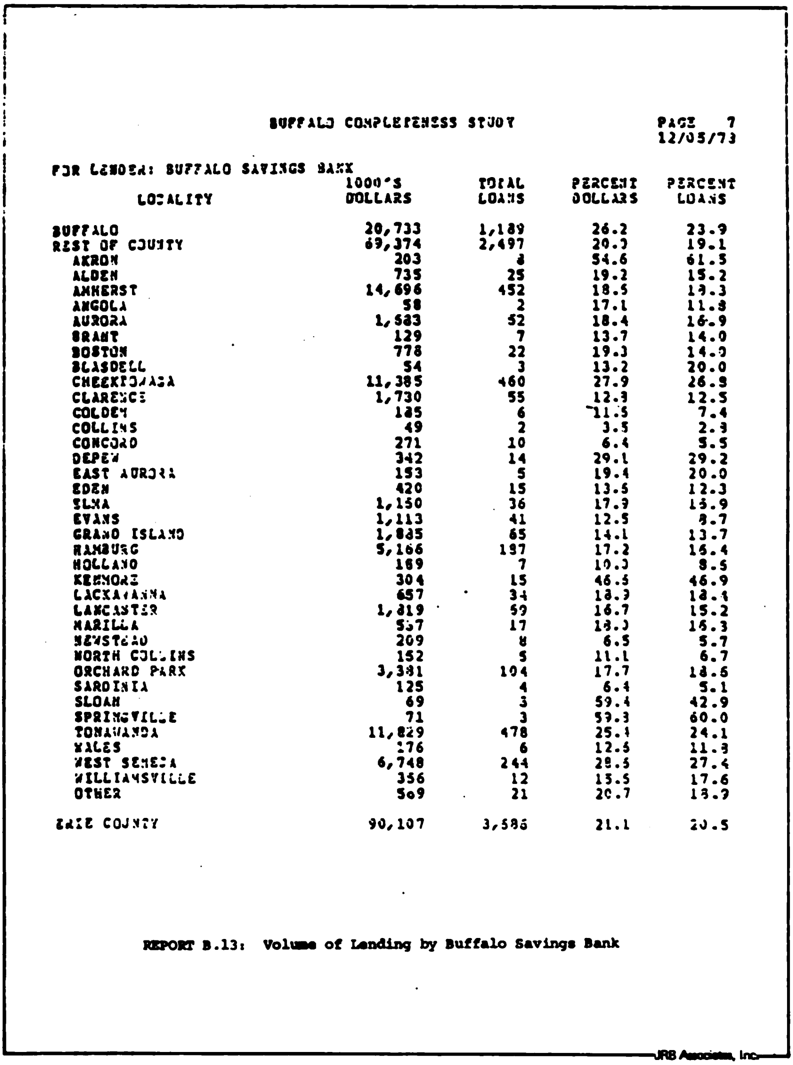
BUFFALO COMPLETENESS STUDY

PAGE 49
12/05/78

FOR LENDER: FIRST FED S&L - BUFFALO

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	530	29	0.7	0.6
REST OF COUNTY	4,785	155	1.4	1.2
ALDEN	51	2	1.3	1.2
AMHERST	1,397	38	1.3	1.5
ANGOLA	32	1	9.6	5.9
AURORA	150	4	1.6	1.3
BRANT	19	1	2.0	2.0
CHEEKTOWAGA	721	26	1.8	1.5
CLARENCE	336	11	2.3	2.5
COLLINS	45	1	3.2	1.4
CONCORD	45	1	1.0	0.5
DERBY	25	1	3.2	3.6
EDEN	80	1	2.6	0.8
ELMA	26	1	0.4	0.5
EVANS	25	1	0.3	0.2
GRAND ISLAND	236	9	2.1	1.9
HAMBURG	176	7	0.5	0.6
HOLLAND	65	2	3.4	2.5
LACKAWANNA	28	1	0.3	0.5
LANCASTER	40	2	0.4	0.4
MARILLA	130	4	4.4	3.8
NEWSTEAD	37	1	1.1	0.7
ORCHARD PARK	333	5	1.7	1.4
TONAWANDA	353	16	0.9	0.8
WALES	76	2	5.4	3.9
WEST SENECA	240	11	1.0	1.2
WILLIAMSVILLE	27	1	1.2	1.5
OTHER	38	2	1.4	1.8
ERIE COUNTY	5,315	184	1.2	1.0

REPORT B.14: Volume of Lending by First Federal S&L of Buffalo



BUFFALO COMPLETENESS STUDY PAGE 7
12/05/73

FOR LENDER: BUFFALO SAVINGS BANK

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	20,733	1,189	26.2	23.9
REST OF COUNTY	69,374	2,497	20.0	19.1
AKRON	203	8	54.6	61.5
ALDEN	735	25	19.2	15.2
AMHERST	14,696	452	18.5	19.3
ANGOLA	58	2	17.1	11.8
AURORA	1,583	52	18.4	16.9
BRANT	129	7	13.7	14.0
BOSTON	778	22	19.3	14.0
BLASDELL	54	3	13.2	20.0
CHEEKTOWAGA	11,385	460	27.9	26.8
CLARENCE	1,730	55	12.8	12.5
COLDEN	185	6	11.5	7.4
COLLINS	49	2	3.5	2.8
CONCORD	271	10	6.4	5.5
DEPEW	342	14	29.1	29.2
EAST AURORA	153	5	19.4	20.0
EDEN	420	15	13.6	12.3
ELMA	1,150	36	17.9	15.9
EVANS	1,113	41	12.5	8.7
GRAND ISLAND	1,885	65	14.1	13.7
HAMBURG	5,166	197	17.2	16.4
HOLLAND	189	7	10.0	8.5
KENMORE	304	15	46.5	46.9
LACKAWANNA	657	34	18.9	18.4
LANCASTER	1,819	59	16.7	15.2
MARILLA	537	17	18.0	16.3
NEWSTEAD	209	8	6.5	5.7
NORTH COLLINS	152	5	11.1	6.7
ORCHARD PARK	3,381	104	17.7	18.6
SARDINIA	125	4	6.4	5.1
SLOAN	69	3	59.4	42.9
SPRINGVILLE	71	3	59.3	60.0
TONAWANDA	11,829	478	25.4	24.1
WALES	276	6	12.6	11.8
WEST SENECA	6,748	244	28.5	27.4
WILLIAMSVILLE	356	12	15.5	17.6
OTHER	509	21	20.7	18.9
ERIE COUNTY	90,107	3,586	21.1	20.5

REPORT B.13: Volume of Lending by Buffalo Savings Bank

JRB Associates, Inc.

BUFFALO COMPLETENESS STUDY

PAGE 49
12/05/78

FOR LENDER: FIRST FED S&L - BUFFALO

LOCALITY	1000'S DOLLARS	TOTAL LOANS	PERCENT DOLLARS	PERCENT LOANS
BUFFALO	530	29	0.7	0.6
REST OF COUNTY	4,785	155	1.4	1.2
ALDEN	51	2	1.3	1.2
AMHERST	1,397	38	1.8	1.5
ANGOLA	32	1	9.6	5.9
AURORA	150	4	1.6	1.3
BRANT	19	1	2.0	2.0
CHEEKTOWAGA	721	28	1.8	1.5
CLARENCE	336	11	2.3	2.5
COLLINS	45	1	3.2	1.4
CONCORD	45	1	1.0	0.5
DERBY	25	1	3.2	3.6
EDEN	80	1	2.6	0.8
ELMA	26	1	0.4	0.5
EVANS	25	1	0.3	0.2
GRAND ISLAND	236	9	2.1	1.9
HAMBURG	176	7	0.6	0.6
HOLLAND	65	2	3.4	2.5
LACKAWANNA	28	1	0.3	0.5
LANCASTER	40	2	0.4	0.4
MARILLA	130	4	4.4	3.8
NEWSTEAD	37	1	1.1	0.7
ORCHARD PARK	333	8	1.7	1.4
TONAWANDA	353	16	0.3	0.8
WALES	76	2	5.4	3.9
WEST SENECA	240	11	1.0	1.2
WILLIAMSVILLE	27	1	1.2	1.5
OTHER	38	2	1.4	1.8
ERIE COUNTY	5,315	184	1.2	1.0

REPORT B.14: Volume of Lending by First Federal S&L of Buffalo

APPENDIX C

DETAILED COMPLETENESS REPORTS FOR COOK COUNTY

This appendix contains six reports showing the volume and percentage of lending by various lenders in Cook County. These reports were prepared from the Chicago Title Co. data discussed in Chapter 5. These six reports provide the following information:

Page	Report	Contents
C-3	C.1	*Volume of Lending in Cook County*
C-4	C.2	*Volume of Lending by HMDA Banks*
C-10	C.3	*Volume of Lending by Other Banks*
C-12	C.4	*Volume of Lending by HMDA S&L's*
C-13	C.5	*Volume of Lending by Other S&L's*
C-14	C.6	*Volume of Lending by Mortgage Companies*

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                                         COMPLETENESS REPORT FOR COOK COUNTY
                                        REPORT 1: MORTGAGE LOANS BY TYPE OF LENDER

                                                              AMOUNT          %           %
                                                                OF          NUMBER      AMOUNT
                                                 NUMBER       LOANS           OF          OF
CODE              LENDER                          LOANS      (1000'S)       LOANS       LOANS

1       HMDA BANKS                                28647       957143        22.86       21.00
2       OTHER BANKS                                 484        18672          .39         .41
3       HMDA SAVINGS & LOANS                      75970      3048559        60.63       66.90
4       OTHER SAVINGS AND LOANS                    2176        80091         1.74        1.76
5       MORTGAGE BANKERS                           7397       242013         5.90        5.31
6       MISCELLANEOUS COMPANIES                    3996        81078         3.19        1.77
7       PRIVATE PARTIES                            6636       128776         5.30        2.82
                                                 125307      4556526       100.00      100.00
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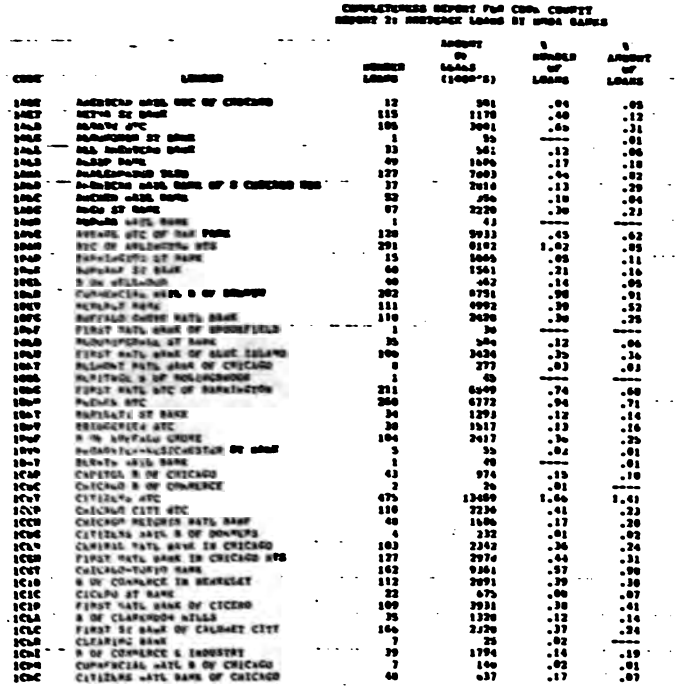
REPORT C.1: Volume of Lending in Cook County



COMPLETENESS REPORT FOR COOK COUNTY
REPORT 2: MORTGAGE LOANS BY HMDA BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
[illegible]	AMERICAN NATL BNK OF CHICAGO	12	301	.04	.05
[illegible]	[illegible] ST BANK	115	1170	.40	.12
[illegible]	[illegible] BTC	186	3001	.65	.31
[illegible]	[illegible] ST BANK	1	55	----	.01
[illegible]	ALL AMERICAN BANK	33	561	.12	.06
[illegible]	[illegible] BANK	49	1696	.17	.18
[illegible]	[illegible]	127	7003	.44	.82
[illegible]	[illegible] NATL BANK OF S CHICAGO HTS	37	2810	.13	.29
[illegible]	[illegible] NATL BANK	52	356	.18	.04
[illegible]	[illegible] ST BANK	87	2220	.30	.23
[illegible]	[illegible] NATL BANK	1	43	----	----
[illegible]	AVENUE BTC OF OAK PARK	128	5933	.45	.62
[illegible]	BTC OF ARLINGTON HTS	291	8102	1.02	.85
[illegible]	[illegible] ST BANK	15	1065	.05	.11
[illegible]	[illegible] ST BANK	60	1561	.21	.16
[illegible]	B OF [illegible]	40	462	.14	.05
[illegible]	COMMERCIAL NATL B OF BERWYN	282	8731	.98	.91
[illegible]	BEVERLY BANK	111	4992	.39	.52
[illegible]	BUFFALO GROVE NATL BANK	110	2420	.38	.25
[illegible]	FIRST NATL BANK OF SPRINGFIELD	1	30	----	----
[illegible]	[illegible] ST BANK	35	586	.12	.06
[illegible]	FIRST NATL BANK OF BLUE ISLAND	100	3424	.35	.36
[illegible]	BELMONT NATL BANK OF CHICAGO	8	277	.03	.03
[illegible]	[illegible] B OF BOLINGBROOK	1	45	----	----
[illegible]	FIRST NATL BTC OF BARRINGTON	211	6549	.74	.68
[illegible]	[illegible] BTC	268	6772	.94	.71
[illegible]	[illegible] ST BANK	34	1293	.12	.14
[illegible]	BRIDGEVIEW BTC	38	1517	.13	.16
[illegible]	B OF BUFFALO GROVE	104	2417	.36	.25
[illegible]	[illegible] ST BANK	5	55	.02	.01
[illegible]	[illegible] NATL BANK	1	40	----	.01
[illegible]	CAPITOL B OF CHICAGO	43	974	.15	.10
[illegible]	CHICAGO B OF COMMERCE	2	26	.01	----
[illegible]	CITIZENS BTC	475	13489	1.66	1.41
[illegible]	CHICAGO CITY BTC	118	2236	.41	.23
[illegible]	CHICAGO HEIGHTS NATL BANK	48	1686	.17	.20
[illegible]	CITIZENS NATL B OF DOWNERS	4	232	.01	.02
[illegible]	CENTRAL NATL BANK IN CHICAGO	103	2342	.36	.24
[illegible]	FIRST NATL BANK IN CHICAGO HTS	127	2976	.44	.31
[illegible]	CHICAGO-TOKYO BANK	162	9361	.57	.98
[illegible]	B OF COMMERCE IN BERKELEY	112	2891	.39	.30
[illegible]	CICERO ST BANK	22	675	.08	.07
[illegible]	FIRST NATL BANK OF CICERO	109	3931	.38	.41
[illegible]	B OF CLARENDON HILLS	35	1320	.12	.14
[illegible]	FIRST ST BANK OF CALUMET CITY	166	2320	.37	.24
[illegible]	CLEARING BANK	7	25	.02	----
[illegible]	B OF COMMERCE & INDUSTRY	39	1794	.14	.19
[illegible]	COMMERCIAL NATL B OF CHICAGO	7	140	.02	.01
[illegible]	CITIZENS NATL BANK OF CHICAGO	48	637	.17	.07

REPORT C.2: Volume of Lending by HMDA Banks

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 2: MORTGAGE LOANS BY HMDA BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
1CNT	ST BANK OF COUNTRYSIDE	96	4777	.34	.50
1COL	COLONIAL BTC OF CHICAGO	101	7498	.47	.78
1CON	CONTINENTAL ILL NATL BTC OF CHICAGO	2915	75891	10.10	7.94
1CmE	CHGO T & SB	4	65	.01	.01
1CBL	HOME ST B OF CRYSTAL LAKE	1	40	----	----
1CmS	CAROL STREAM BANK	1	1	----	----
1CmT	FIRST NATL BANK OF CRYSTAL LAKE	2	24	.01	----
1DAR	DARIEN BANK, THE	4	111	.01	.01
1DEF	DEERFIELD ST BANK	17	614	.06	.06
1DEP	DEMPSTER PLAZA ST BANK	34	1400	.12	.15
1DLS	DES PLAINES NATL BANK	7	207	.02	.02
1DEV	DEVON BANK	127	817	.44	.09
1DOL	FIRST NATL BANK IN DOLTON	139	6476	.49	.60
1DNF	FIRST NATL BANK OF DEERFIELD	20	1123	.07	.12
1DRV	DROVERS NATL BANK OF CHICAGO	46	1610	.16	.16
1FRI	DeLAIEL NATL BANK	6	34	.02	----
1DNP	DES PLAINES BANK, THE	27	573	.09	.06
1DUN	FIRST B OF DUNDEE	1	20	----	----
1DUP	DUPAGE BTC	2	100	.01	.01
1DGN	DOWNERS GROVE NATL BANK	8	372	.03	.04
1EAS	EAST SIDE BTC	78	2191	.27	.23
1EDG	COMMUNITY BTC OF EDGEWATER	150	6194	.52	.66
1EDP	EDENS PLAZA ST BANK	4	46	.01	----
1EGN	FIRST NATL BANK OF ELGIN	21	1910	.07	.20
1EGV	SUBURBAN NATL BANK OF ELK	80	2030	.28	.25
1EGW	EDGEWOOD BANK	51	1934	.18	.20
1EMS	ELMHURST NATL BANK	57	3032	.20	.32
1ELG	ELGIN ST BANK	8	276	.03	.03
1FLE	B OF ELK GROVE	3	96	.01	.01
1ELM	B OF ELMHURST	2	8	.01	----
1ELN	ELGIN NATL BANK	9	650	.03	.07
1EVG	FIRST NATL B OF EVERGREEN PARK	437	18900	1.53	1.97
1EVN	EVANSTON BANK	55	2669	.19	.28
1EVR	EVERGREEN PLAZA BANK	15	779	.05	.08
1EXC	EXCHANGE NATL BANK OF CHICAGO	28	1576	.10	.16
1FAR	FIRST ARLINGTON NATL BANK-ARL HTS	104	4130	.36	.43
1FCB	FIRST COMMERCIAL BANK	42	1113	.15	.12
1FCG	FIRST NATL BANK IN CHICAGO	2456	107624	8.58	11.27
1FDP	FIRST NATL BANK OF DES PLAINES	62	1074	.22	.11
1FEV	FIRST NATL BTC OF EVANSTON	510	15697	1.80	1.64
1FKL	FRANKLIN PARK BANK	57	2603	.20	.27
1FRP	FIRST STATE BTC OF FRANKLIN PARK	124	2974	.43	.31
1FOB	FIRST NATL BTC OF OAK BROOK	4	202	.01	.02
1FOK	FIRST B OF OAK PARK	78	2739	.27	.29
1FCD	FORD CITY BTC	722	31237	2.52	3.26
1FPL	FIRST BTC OF PALATINE	22	514	.08	.06
1FSC	FIRST SECURITY BANK OF CHICAGO	9	329	.03	.03
1FWC	FIRST NATL BANK OF WEST CHICAGO	21	1447	.07	.15
1GAT	GATEWAY NATL BANK OF CHICAGO	2	2	.01	----

REPORT C.2: Volume of Lending by HMDA Banks

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 2: MORTGAGE LOANS BY HMDA BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
1GAW	GARY-WHEATON BANK	21	625	.07	.07
1GLC	GLENCOE NATL BANK	25	373	.08	.04
1GLE	FIRST SECURITY BANK OF GLEN ELLYN	3	65	.01	.01
1GLF	GOLF MILL ST BANK	2	19	.01	----
1GLV	GLENVIEW ST BANK	493	15453	1.74	1.62
1GRD	GARFIELD RIDGE T & SB	150	5549	.52	.58
1GUA	GUARANTY BTC	24	1249	.08	.13
1HAM	ST BANK OF HAMPSHIRE	2	29	.01	----
1HAN	FIRST ST BTC OF HANOVER PARK	159	1235	.56	.13
1HAR	FIRST NATL BANK IN HARVEY	81	1339	.29	.14
1HAW	HAWTHORNE B OF WHEATON	9	232	.03	.02
1HCC	HERITAGE B OF COUNTRY CLUB HILLS	105	3506	.37	.37
1HER	HERITAGE/STANDARD BTC	133	8522	.47	.89
1HFE	SUBURBAN B OF HOFFMAN ESTATES	131	1945	.46	.20
1HGP	B OF HIGHLAND PARK	10	193	.03	.02
1HGC	HIGHLAND COMMUNITY BANK	77	4677	.27	.49
1HIL	B OF HILLSIDE	21	294	.07	.03
1HIN	B OF HINSDALE	6	94	.02	.01
1HKH	B OF HICKORY HILLS	143	5728	.50	.60
1HLK	HERITAGE FIRST NATL B OF LOCKPORT	6	349	.02	.04
1HLP	FIRST NATL BANK OF HIGHLAND PARK	33	2468	.12	.26
1HMF	COMMUNITY B OF HOMEWOOD-FLOSSMOOR	85	3437	.30	.36
1HNT	ST BANK OF HUNTLEY	3	196	.01	.02
1HOM	B OF HOMEWOOD	151	4830	.53	.50
1HPC	HERITAGE COUNTY BTC	105	2923	.37	.31
1HRS	HARRIS T & SB	539	28004	1.88	2.93
1HRT	HERITAGE BANK	1	96	----	.01
1HSC	HERITAGE B OF SCHAUMBURG	16	994	.06	.10
1HVY	FIRST ST BANK OF HARVEY	86	1539	.30	.16
1HWD	HERITAGE B OF WOODRIDGE	9	208	.03	.02
1HYD	HYDE PARK BTC	221	6140	.77	.64
1ICH	ILLINOIS ST BANK OF CHICAGO	4	42	.01	----
1IND	INDEPENDENCE B OF CHICAGO	1	20	----	----
1ISB	INTERSTATE B OF OAK FOREST	153	3007	.54	.31
1JEF	JEFFERSON ST BANK	48	379	.17	.04
1JOL	NATL BANK OF JOLIET	3	36	.01	----
1LAG	FIRST NATL BANK OF LAGRANGE	29	1244	.10	.13
1LAN	FIRST NATL BANK OF LANSING	132	3186	.46	.33
1LAS	LASALLE NATL BANK	223	9505	.78	.99
1LBY	LIBERTYVILLE NATL BANK	13	491	.05	.05
1LCK	LINCOLN NATL BANK	22	656	.08	.07
1LCW	FIRST NATL BANK OF LINCOLNWOOD	4	312	.01	.03
1LGS	LAGRANGE ST BANK	105	2898	.37	.30
1LIB	FIRST NATL BANK OF LIBERTYVILLE	6	276	.02	.03
1LKF	FIRST NATL BANK OF LAKE FOREST	12	395	.04	.04
1LKS	LAKE SHORE NATL BANK	48	3273	.17	.34
1LKV	LAKE VIEW T & SB	374	12117	1.31	1.27
1LKZ	ST BANK OF LAKE ZURICH	20	531	.07	.06
1LLI	BANK LEUMI LE-ISRAEL B.M.	4	265	.01	.03

REPORT C.2: Volume of Lending by HMDA Banks

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 2: MORTGAGE LOANS BY HMDA BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
1LLO	LLOYDS BANK INTERNATIONAL LIMITED	1	86	----	.01
1LCP	LAWNDALE T & SB	46	567	.16	.06
1LAS	FIRST NATL BANK OF LINCOLNSHIRE	7	314	.02	.03
1LNW	B OF LINCOLNWOOD	1	9	----	----
1LLX	NEW LENOX ST BANK	3	64	.01	.01
1LOA	ST BANK OF LOMBARD	3	199	.01	.02
1LSD	LAKESIDE BANK	67	2024	.23	.21
1LYO	B OF LYONS	88	3954	.31	.41
1MAC	MAIN B OF CHICAGO	15	149	.05	.02
1MAD	MADISON BTC	393	7294	1.37	.76
1MAL	NATL B OF LOMBARD	4	182	.01	.02
1MAR	MARINA BANK	63	4334	.22	.46
1MAY	FIRST NATL BANK OF MAYWOOD	10	79	.03	.01
1MWT	MIDWEST BTC	91	5425	.32	.57
1MCB	MICHIGAN AVE NATL BANK OF CHICAGO	56	3480	.20	.36
1MCA	MID-AMERICA BANK	1	74	----	.01
1MOT	MID-TOWN BANK OF CHICAGO	2	330	.01	.03
1MCN	MID-WEST NATL BANK OF LAKE FOREST	1	60	----	.01
1MER	MERCHANDISE NATL BANK OF CHICAGO	448	4189	1.56	.44
1MET	METROPOLITAN BTC	103	2474	.36	.26
1MGO	MOUNT GREENWOOD BANK	64	2123	.22	.22
1MID	MID-CITY NATL BANK OF CHICAGO	79	3124	.28	.33
1MLP	MELROSE PARK NATL BANK	214	8498	.75	.89
1MLI	MIDLOTHIAN ST BANK	384	5851	1.34	.61
1MMF	MERCHANTS AND MANUFACTURERS ST BANK	9	44	.03	.01
1MMG	FIRST NATL BANK OF MORTON GROVE	144	6234	.50	.65
1MMP	MOUNT PROSPECT ST BANK	206	7876	.72	.82
1MNC	MERCANTILE NATL BANK OF CHICAGO	10	593	.03	.06
1MQT	MARQUETTE NATL BANK	644	8368	2.25	.87
1MSA	METROPOLITAN T & SB OF ADDISON	43	2435	.15	.25
1MTG	MORTON GROVE BANK	15	416	.05	.04
1MTP	FIRST NATL B OF MOUNT PROSPECT	1	34	----	----
1MTR	MATTESON-RICHTON BANK	19	847	.07	.09
1MYP	MAYWOOD-PROVISO ST BANK	267	3096	.93	.32
1NAP	B OF NAPERVILLE	6	102	.02	.01
1NBA	NATL BANK OF AUSTIN	52	1106	.18	.12
1NBC	NATL BOULEVARD B OF CHICAGO	59	2495	.21	.26
1NNP	NORTH SHORE T & SB	154	8284	.54	.87
1NCP	NORTH COMMUNITY ST BANK	27	531	.09	.06
1NGR	NATL BANK OF GREECE, S.A.	1	15	----	----
1NIL	FIRST NATL BANK OF NILES	178	5926	.62	.62
1NLB	NORTH LAKE BANK	57	636	.20	.07
1NNC	NATL BANK OF NORTH CHICAGO	2	34	.01	----
1NNE	NATL BANK OF NORTH EVANSTON	49	2015	.17	.21
1NOB	FIRST NATL BANK OF NORTHBROOK	117	4546	.41	.47
1NOF	B OF NORTHFIELD	26	689	.09	.07
1NGT	NORTHERN TRUST CO.	366	19136	1.28	2.00
1NPR	NAPERVILLE BTC	1	5	----	----
1NPT	NORTH POINT ST BANK	20	526	.07	.05

REPORT C.2: Volume Lending by HMDA Banks

JRB Associates, Inc.

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 2: MORTGAGE LOANS BY HMDA BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
1NRC	NATL REPUBLIC B OF CHICAGO	4	92	.01	.01
1NSC	NATL SECURITY B OF CHICAGO	59	2756	.21	.29
1NSH	NORTH SHORE NATL BANK	56	1008	.20	.17
1NTH	NORTH BANK	42	3452	.15	.36
1NWE	NORTHWEST NATL BANK OF CHICAGO	316	13197	1.10	1.38
1OAK	FIRST SECURITY BANK OF OAK BROOK	3	49	.01	.01
1OAL	OAK LAWN T & SB	18	494	.06	.05
1OBB	OAK BROOK BANK	10	474	.03	.05
1OBT	B OF OAK BROOK TERRACE	19	617	.07	.06
1OHA	O'HARE INTERNATIONAL BANK	244	12506	.85	1.31
1OKL	FIRST NATL BANK OF OAK LAWN	183	5056	.64	.53
1OKP	OAK PARK T & SB	342	13523	1.19	1.41
1OLF	FIRST SUBURBAN B OF OLYMPIA FIELDS	16	243	.06	.03
1OLW	HERITAGE B OF OAK LAWN	17	818	.06	.09
1OLY	HERITAGE OLYMPIA BANK	39	982	.14	.10
1OLD	OLD ORCHARD BTC	96	2716	.34	.28
1PAL	B OF PALATINE	42	2054	.15	.21
1PDI	PLAZA DRIVE-IN BANK	12	434	.04	.05
1PIO	PIONEER B&TC	726	12946	2.53	1.35
1PKF	B OF PARK FOREST	84	1294	.29	.14
1PNB	PARK NATL BANK OF CHICAGO	107	2676	.37	.28
1PRP	FIRST ST BTC OF PARK RIDGE	122	5065	.43	.53
1PWY	PARKWAY B&TC	247	14155	.86	1.48
1PLG	PLUM GROVE BANK	2	31	.01	----
1PLT	PALATINE NATL BANK	126	5135	.44	.54
1PLS	PALOS BTC	47	2506	.16	.26
1PUL	HERITAGE PULLMAN BTC	241	10166	.84	1.06
1RAV	B OF RAVENSWOOD	419	8132	1.46	.85
1RDL	FIRST ST BANK OF ROUND LAKE	1	12	----	----
1REP	REPUBLIC B OF CHICAGO	119	3149	.42	.33
1RVD	RIVERDALE BANK	231	6199	.81	.65
1RIF	RIVER FOREST ST BTC	12	88	.04	.01
1RIG	RIVER GROVE ST BANK	2	97	.01	.01
1RIO	RIVER OAKS BTC	55	1887	.19	.20
1RLM	SUBURBAN B OF ROLLING MEADOWS	42	719	.15	.08
1RUS	RUSSELL ST BTC	150	4490	.52	.47
1SCH	SCHAUMBURG ST BANK	37	1949	.13	.20
1SCS	SOUTH CHICAGO SAVINGS BANK	31	517	.11	.05
1SEA	SEARS B&TC	47	604	.16	.06
1SEW	SEAWAY NATL BANK OF CHICAGO	56	714	.20	.06
1SKK	FIRST NATL BANK OF SKOKIE	208	12232	.96	1.28
1SKO	SKOKIE T & SB	129	3772	.45	.39
1SOC	SOUTH CENTRAL BTC OF CHICAGO	45	549	.16	.05
1SOH	SOUTH HOLLAND T & SB	205	7822	.72	.82
1SSB	SOUTH SIDE BANK	6	228	.02	.02
1SSN	SOUTH SHORE NATL BANK OF CHICAGO	2	190	.01	.02
1STC	ST BANK OF ST. CHARLES	11	488	.04	.05
1STL	STEEL CITY NATL BANK OF CHICAGO	163	4755	.57	.50
1STN	STATE NATL BANK	491	18605	1.71	1.89

REPORT C.2: Volume of Lending by HMDA Banks

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 2: MORTGAGE LOANS BY HMDA BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
1STS	SUBURBAN T & SB	51	1202	.18	.13
1THR	THORNBRIDGE ST BANK	27	161	.09	.02
1TIN	TINLEY PARK BANK	225	8819	.79	.92
1TRI	TRI-STATE BANK	51	1776	.18	.19
1UAM	UNITED OF AMERICA BANK	7	440	.02	.05
1UNI	UNION NATL BANK OF CHICAGO	78	3278	.27	.34
1UNJ	UNION NATL BTC OF JOLIET	5	401	.02	.04
1UNT	UNION NATL BTC OF ELGIN	11	416	.04	.04
1UNY	UNIVERSITY NATL BANK	50	372	.17	.04
1UPN	UPPER AVENUE BANK	6	472	.02	.05
1UPT	UPTOWN NATL BANK OF CHICAGO	13	191	.05	.02
1VAL	VALLEY BTC	6	204	.02	.02
1VNA	VALLEY NATL BANK OF AURORA	1	43	----	----
1VPK	VILLA PARK T & SB	1	4	----	----
1WAU	WAUCONDA NATIONAL BANK	2	110	.01	.01
1WCC	WESTERN NATL BANK OF CICERO	88	2202	.30	.23
1WCH	WEST CHICAGO ST BANK	1	85	----	.01
1WDF	WOODFIELD BANK	107	1979	.37	.21
1WDL	FIRST SECURITY BANK OF WOODDALE	18	258	.06	.03
1WLS	WEST SUBURBAN BANK	6	208	.02	.02
1WHE	B OF WHEATON	3	59	.01	.01
1WHL	WHEELING T & SB	74	5456	.26	.57
1WLM	FIRST NATL BANK OF WILMETTE	19	245	.07	.03
1WNK	FIRST NATL BANK OF WINNETKA	179	9748	.62	1.02
1WOO	FIRST NATL BANK OF WOODSTOCK	1	150	----	.02
1WNT	WORTH BANK & TRUST	102	3340	.36	.35
1WSS	FIRST NATL BANK OF WESTERN SPRINGS	4	465	.01	.05
1WIK	WINNETKA BANK	93	4686	.32	.46
1YKS	YORK STATE BTC	12	621	.04	.06
1YKT	B OF YORKTOWN	5	246	.02	.03
		28647	957143	100.00	100.00

REPORT C.2: Volume of Lending by HMDA Banks

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 3: MORTGAGE LOANS BY OTHER BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
2ADD	HERITAGE B OF ADDISON	7	219	1.45	1.16
2ARL	ARLINGTON NATL BANK -A - ARLINGTON	1	36	.21	.19
2ASP	FIRST STATE BANK OF ALSIP	21	946	4.34	5.00
[illegible]	[illegible] BTC	1	10	.21	.05
[illegible]	BENSENVILLE ST BANK	22	1187	4.55	6.29
2BIN	B OF INDIANA	4	59	.83	.32
2BOF	B OF OAK FOREST	1	3	.21	.02
2BTS	[illegible] T & SB	1	75	.21	.40
2CON	CONTINENTAL BANK	2	22	.41	.12
2CCT	CITY BTC	1	31	.21	.16
2CHA	B OF CHANNAHON	1	45	.21	.24
2CHE	CHESTERFIELD ST BANK	1	31	.21	.16
2CHG	FIRST NATL BTC OF CHICAGO	1	8	.21	.04
2CHP	FIRST NATL BTC OF HANOVER PARK	1	8	.21	.04
2CHV	B OF CHERRY VALLEY	1	30	.21	.16
2CLU	CALUMET NATL BANK	7	361	1.45	1.92
2CML	COMMERCIAL NATL BANK	7	508	1.45	2.69
2CMR	B OF COMMERCE	12	303	2.48	1.61
2CMT	COMMUNITY BTC	20	922	4.13	4.89
2CTR	CITY NATL BTC OF ROCKFORD	2	137	.41	.73
2CZC	CITIZENS ST B OF [illegible]	1	40	.21	.21
2DKA	NATL BANK IN DEKALB	1	2	.21	.01
2DUN	DUNHAM BANK	3	48	.62	.25
2DUB	ILLINOIS DUBUQUE BTC	1	70	.21	.37
2ECI	FIRST NATL BANK OF EAST CHICAGO,IND	22	1072	4.55	5.66
2ELM	SUBURBAN B OF ELMHURST	1	137	.21	.73
2FBC	FIRST BK OF CLEVELAND	3	105	.62	.56
2FBH	FIRST B OF HARVEY	1	11	.21	.06
2FLW	FARMERS ST BANK OF LEWISTOWN	1	14	.21	.07
2FNA	FIRST BANK NATIONAL ASSN	1	21	.21	.11
2FBD	FIRST CITY BTC	1	20	.21	.11
2FMB	FARMERS AND MECHANICS BANK	1	7	.21	.04
2FSB	FAIRWAY SAVINGS	1	13	.21	.07
2FST	FIRST BTC	39	1143	8.06	6.05
2GAF	FIRST NATL BANK OF GLEN FOREST	1	38	.21	.20
2GAT	GARY NATIONAL BANK	5	293	1.03	1.55
2HVL	[illegible] NATL BANK	1	30	.21	.16
2HUD	HOOSIER ST BANK OF INDIANA	4	40	.83	.22
2HPF	HERITAGE B OF PARK FOREST SOUTH	13	540	2.69	2.86
2HIS	[illegible] CENTER ST BANK	2	[illegible]	.41	.75
2ILC	ILLINOIS NATL BK OF CHICAGO	4	300	.83	1.59
2INA	B OF INDIANA NAT ASSN	4	400	.83	2.12
2INR	ILLINOIS NATL BTC OF ROCKFORD	1	50	.21	.26
2JEP	JEFFERSON T & SB OF PEORIA	1	57	.21	.30
2KRP	[illegible] PARK T & SB	2	16	.41	.09
2KOR	EUREKA EXCHANGE BANK	10	995	2.07	5.27
2LCK	FIRST NATL BANK OF LION CREEK	3	136	.62	.72
2LOP	FIRST NATL BANK OF LOCKPORT	2	80	.41	.42
2LUP	UNITED B OF LOVES PARK	1	20	.21	.11

REPORT C.3: Volume of Lending by Other Banks

JRB Associates, Inc

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 3: MORTGAGE LOANS BY OTHER BANKS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
[illegible]	[illegible] NATL BANK	2	192	.41	1.02
[illegible]	MERCANTILE NATL BANK OF INDIANA	12	312	2.48	1.66
[illegible]	FIRST N OF MEADOWVIEW	1	46	.21	.24
[illegible]	MANUFACTURERS N OF DETROIT	5	836	1.03	4.44
[illegible]	MILLIKIN NATL BANK OF DECATUR	1	16	.21	.09
[illegible]	MADISON NATL BANK OF NILES	35	1416	7.23	7.50
[illegible]	MANITOWOC ST BANK	1	30	.21	.16
[illegible]	MARQUETTE BTC OF ROCHESTER	1	15	.21	.08
[illegible]	MERCHANTS NATL BTC OF INDIANAPOLIS	1	28	.21	.15
[illegible]	FIRST NATL BANK OF [illegible]	1	40	.21	.21
[illegible]	MADISON NATL BANK OF WHEELING	1	30	.21	.16
[illegible]	FIRST N OF MAYWOOD	1	6	.21	.03
[illegible]	NATL BANK OF ALBANY PARK (CHICAGO)	64	1112	13.22	5.89
[illegible]	NATL BANK OF ELGIN	1	9	.21	.05
[illegible]	ST BANK OF [illegible]	1	30	.21	.16
[illegible]	FIRST NATL BTC AT NEILLSVILLE, WISC	2	51	.41	.27
[illegible]	NORTHERN INDIANA BTC	1	50	.21	.26
[illegible]	[illegible] N OF ROCKFORD	1	31	.21	.16
[illegible]	NEW YORK B OF SAVINGS	1	154	.21	.82
[illegible]	FIRST ST BANK OF PEKIN	1	52	.21	.28
[illegible]	FIRST N OF PARK FOREST SOUTH	6	134	1.24	.71
[illegible]	[illegible] BANK	3	51	.62	.27
[illegible]	ROCK COUNTY NATL BANK	1	49	.21	.26
[illegible]	N OF ROLLING MEADOWS	24	639	4.96	3.39
[illegible]	FIRST SAVINGS OF LAGRANGE PARK	6	252	1.24	1.34
[illegible]	ST BANK OF MEDFORD	1	50	.21	.26
[illegible]	STATE EXCHANGE BANK	1	2	.21	.01
[illegible]	STATE INTERSTATE BANK OF OAK FOREST	1	10	.21	.05
[illegible]	STATE NATL BANK OF EVANSTON	2	7	.41	.04
[illegible]	SUN CAPITAL BTC	3	349	.62	1.85
[illegible]	SPRINGFIELD MARINE BANK	1	40	.21	.21
[illegible]	STANDARD BTC	7	900	1.45	4.77
[illegible]	FIRST NATL BANK IN STAUNTON	1	40	.21	.21
[illegible]	SUBURBAN NATL BANK OF WOODFIELD	25	431	5.17	2.29
[illegible]	THIRD NATL BTC OF DAYTON, OHIO	1	95	.21	.50
[illegible]	TOLLWAY-ARLINGTON NATL BANK	2	20	.41	.11
[illegible]	UNION ST BANK	1	49	.21	.26
[illegible]	FIRST NATL BANK OF VALPARAISO	1	25	.21	.13
[illegible]	FIRST NATL BANK OF [illegible]	8	311	1.65	1.65
[illegible]	FIRST WISC NATL BANK OF BROOKFIELD	1	28	.21	.15
[illegible]	NATL BANK OF WOODFIELD	1	18	.21	.10
[illegible]	FIRST WISC NATL BANK OF MILWAUKEE	3	120	.62	.64
[illegible]	[illegible] SAVINGS ASSN	1	60	.21	.32
[illegible]	FIRST NATL BANK OF LAKE ZURICH	4	105	.83	.56
		484	18872	100.00	100.00

REPORT C.3: Volume of Lending by Other Banks

JRB Associates, Inc.

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 4: MORTGAGE LOANS BY HMDA SAVINGS & LOANS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
3AHP	AMERICAN HOME S&LA	80	3453	.12	.11
3AJS	A.J. SMITH FS&L	210	7195	.28	.24
3ALD	ALLIED S&LA	107	3680	.14	.12
3ALL	ALLIANCE S&LA	1633	67946	2.16	2.23
3AMF	AMERICANA FS&LA OF CHICAGO	88	2693	.11	.09
3AMH	AMERICAN HERITAGE S&LA	120	5278	.16	.17
3AMI	AMITY FS&LA	241	8990	.32	.29
3AMU	AMERICAN UNION S&LA	20	711	.03	.02
3ALT	ANTIOCH S&LA	33	3721	.04	.12
3ARC	ARCHER FS&LA	149	5325	.20	.17
3ARG	ARGO S&LA	140	5147	.19	.17
3ARH	ARLINGTON HTS FS&LA	1112	40336	1.46	1.32
3AUS	AUSTIN FS&LA	491	16621	.65	.55
3AVN	AVONDALE S&LA	746	29363	.98	.96
3BEF	BEN FRANKLIN S&LA	41	2206	.05	.07
3BEL	BELL FS&LA	2060	90210	2.72	2.96
3BRI	BRIGHTON FS&LA	11	353	.01	.01
3BRK	BROOKFIELD FS&LA	513	25621	.68	.85
3BVW	BROADVIEW S&LA	125	6562	.16	.22
3CAL	CALUMET FS&LA	550	16983	.72	.56
3CAP	CAPITOL FS&LA	329	14539	.43	.48
3CBL	CHICAGO BLDG LOAN & HOMESTEAD ASSN	11	136	.01	----
3CBS	COLUMBUS S&LA	44	1642	.06	.05
3CCA	CONCORDIA FS&LA	620	29700	.82	.98
3CEN	CENTRAL S&LA	370	14502	.49	.48
3CHF	CHICAGO FED. S&LA	1095	56443	1.44	1.85
3CHT	CHICAGO HTS. FS&LA	652	25510	.86	.84
3CIV	CIVIC FS&LA	119	1769	.16	.06
3CKC	COOK COUNTY FS&LA	545	24225	.72	.79
3CLY	CLYDE S&LA	667	25700	.88	.84
3CMK	CERMAK RD. S&LA	36	1166	.05	.04
3CNF	CENTRAL FS&LA	477	21462	.63	.76
3CNT	CENTURY S&LA	74	1626	.10	.05
3CMN	COMMUNITY S&LA	175	7595	.23	.26
3COP	COOPERATIVE S&LA	10	211	.01	.01
3CPT	CAPITOL S&LA	38	672	.05	.02
3CRD	CARDINAL S&LA	3	239	----	.01
3CRG	CRAGIN FS&LA	1357	59175	1.79	1.94
3CRL	FIRST FS&LA OF CRYSTAL LAKE	40	2409	.05	.08
3CRW	CRAWFORD S&LA	748	16916	.98	.55
3CRY	CARY GROVE S&LA	1	36	----	----
3CSF	CHESTERFIELD FS&LA OF CHICAGO	948	30618	1.25	.98
3CSL	CHICAGO S&LA	761	24011	1.00	.79
3CIZ	CITIZENS S&LA	100	2375	.13	.08
3CZF	CITIZENS FS&LA OF MATTESON	1	21	----	----
3DAM	DAMEN S&LA	278	10212	.37	.34
3DLR	DOLTON-RIVERDALE S&LA	175	5370	.23	.18
3DRF	DEERFIELD S&LA	129	8346	.17	.27
3DUG	DOUGLAS S&LA	56	2467	.08	.08

REPORT C.4: Volume of Lending by HMDA S&L's

COMPLAINANTS REPORT FOR COOK COUNTY
REPORT 4: MORTGAGE LOANS BY HMDA SAVINGS & LOANS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
3EAS	EAST SIDE S&LA	121	3374	.16	.11
3ECO	ECONOMY S&LA	240	9047	.32	.30
3FLG	ELGIN FS&LA	62	3180	.08	.10
3ELM	ELMHURST FS&LA	64	2352	.08	.08
3EVA	EVANSTON FS&LA	660	28570	.87	.94
3EVG	EVERGREEN S&LA	359	12376	.47	.40
3FAM	FAMILY FS&LA OF CICERO	58	1680	.08	.06
3FBA	FIRST FS&LA OF BARRINGTON	60	2641	.08	.09
3FCC	FIRST CALUMET CITY SAVINGS	487	21961	.64	.72
3FDP	FIRST FS&LA OF DES PLAINES	779	31340	1.03	1.03
3FEL	FIRST FS&LA OF ELGIN	71	2912	.09	.16
3FIR	FIRST FS&LA OF [illegible]	300	12263	.40	.40
3FFC	FIRST FS&LA OF CHICAGO	8370	349646	11.02	11.46
3FFN	FIRST FINANCIAL S&LA	545	20607	.74	.69
3FID	FIDELITY FS&LA OF [illegible]	245	9316	.32	.31
3FIC	FIDELITY FS&LA OF CHICAGO	601	20333	.79	.67
3FSB	FRANKLIN SA	213	9641	.28	.32
3FOF	FINANCIAL FS&LA OF OLYMPIA FIELDS	1160	63109	1.54	2.07
3FAF	FAIRFIELD S&LA	327	11260	.43	.37
3FSA	FIRESIDE FS&LA	180	9298	.24	.31
3FSC	FINANCIAL SECURITY S&LA	448	21656	.59	.72
3FTD	FT. DEARBORN FS&LA	102	4327	.13	.14
3GAG	GAGE PARK S&LA	181	5899	.24	.19
3GAM	GREAT AMERICAN FS&LA	1139	44366	1.50	1.46
3GAS	GUARDIAN S&LA	495	15046	.65	.49
3GLE	GLEN ELLYN S&LA	48	3601	.06	.12
3GLV	GLENVIEW GUARANTY S&LA	411	22235	.54	.73
3GOM	[illegible] S&LA	512	17437	.67	.57
3GUA	GUARANTY S&LA	61	1636	.08	.05
3GWN	GEORGE WASHINGTON S&LA	313	9473	.41	.31
3HEG	FIRST S&LA OF HEGEWISCH	423	15089	.56	.49
3HEM	HEMLOCK FS&LA	376	22799	.50	.75
3HIN	HINSDALE FS&LA	172	6582	.23	.21
3HOA	HOME S&LA OF AURORA	1	39	----	----
3HOE	HOME FS&LA OF ELGIN	109	4954	.14	.16
3HOJ	HOME FS&LA OF JOLIET	30	1282	.04	.04
3HOW	HOMEWOOD FS&LA	447	16653	.59	.55
3HOM	HOME FS&LA OF CHICAGO	1260	37002	1.66	1.22
3HUM	[illegible] S&LA	100	5765	.13	.19
3HUT	[illegible]	457	15113	.60	.50
3HWC	HAWTHORNE CLUB S&LA	88	2616	.12	.09
3HYD	HYDE PARK FS&LA	250	11170	.33	.37
3IRV	IRVING FS&LA	459	19621	.60	.64
3ISV	ILLINOIS/SERVICE FS&LA	159	4320	.21	.14
3JOL	JOLIET FS&LA	276	9613	.37	.31
3LKB	LAKE S&LA	78	2901	.10	.10
3LAG	LAGRANGE FS&LA	438	19189	.58	.63
3LAN	FIRST FS&LA OF LANSING	239	9130	.31	.30
3LBT	LIBERTY SAVINGS	951	41615	1.26	1.37

REPORT C.4: Volume of Lending by HMDA S&L's

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 4: MORTGAGE LOANS BY HMDA SAVINGS & LOANS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
JLEM	LEMONT SA	109	4560	.14	.15
JLIB	LIBERTY FS&LA OF CHICAGO	712	35149	.94	1.15
JLIF	LIFE S&LA OF AMERICA	96	3170	.13	.10
JLIN	LINCOLN FS&LA OF BERWYN	890	34093	1.16	1.14
JLIS	LISLE S&LA	5	216	.01	.01
JLKF	LAKE FOREST S&LA	14	1050	.02	.03
JLNP	LINCOLN PARK FS&LA	336	9850	.44	.32
JLNS	LANSING FS&LA	144	4021	.19	.13
JLOB	LOMBARD S&LA	220	8954	.29	.29
JLSQ	LINCOLN SQUARE S&LA	154	8319	.20	.27
JLWM	LAWN MANOR S&LA	74	3379	.10	.11
JLWY	LINCOLN WAY S&LA	1	20	----	----
JLYO	LYONS S&LA	169	10311	.22	.34
JMAN	MANNING S&LA	95	3075	.13	.10
JMAR	MARENGO FS&LA	1	33	----	----
JMCH	MCHENRY S&LA	1	40	----	----
JMDL	MIDLAND S&LA	344	10565	.45	.35
JMDW	MIDWEST S&LA	19	765	.03	.02
JMEL	MELROSE SAVINGS	608	23351	.80	.76
JMID	MID-AMERICA FS&LA	328	15820	.43	.52
JMNR	MANOR FS&LA	28	722	.04	.02
JMPK	MORGAN PARK S&LA	6	160	.01	----
JMTP	MOUNT PROSPECT FS&LA	132	5210	.17	.17
JMUN	MUNDELEIN S&LA	2	130	----	----
JMUT	MUTUAL FS&LA OF CHICAGO	233	7159	.31	.24
JNAP	NAPERVILLE S&LA	2	10	----	----
JNAS	NATIONAL SECURITY S&LA	76	2195	.10	.07
JNAT	NATIONAL S&LA	137	8160	.18	.27
JNIL	NILES S&LA	137	6571	.18	.22
JNWR	NORTH WEST FS&LA OF CHICAGO	3895	157980	5.13	5.18
JNNA	NORTH AMERICA FS&LA	115	4759	.15	.16
JNNC	NORTH CHICAGO S&LA	1	130	----	----
JNNS	NORTH SIDE FS&LA OF CHICAGO	93	4420	.12	.15
JNRT	NORTH FS&LA OF CHICAGO	225	11226	.30	.37
JNRW	NORTHWESTERN S&LA	762	29985	1.00	.98
JNWD	NORWOOD FS&LA	430	21436	.57	.70
JOLY	OLYMPIC S&LA	714	31770	.94	1.04
JORP	FIRST S&LA OF ORLAND PARK	150	4591	.20	.15
JPAL	PALATINE S&LA	174	9011	.23	.30
JPEO	PEOPLES FS&LA	127	3103	.17	.10
JPLP	PEOPLES S&LA	6	264	.01	.01
JPLS	PALOS S&LA	431	21792	.57	.71
JPRE	PREFERRED S&LA	158	5499	.21	.18
JPRL	PEERLESS FS&LA OF CHICAGO	518	19418	.68	.64
JPRO	PROSPECT FS&LA OF NORTHERN ILL.	316	13469	.42	.44
JPUB	PUBLIC FS&LA	782	30601	1.03	1.00
JPUL	PULASKI S&LA	89	1689	.12	.06
JPVT	FIRST FS&LA OF PROVISO TOWNSHIP	233	7953	.31	.26
JREL	RELIANCE FS&LA OF CHICAGO	200	5032	.26	.16

REPORT C.4: Volume of Lending by HMDA S&L's

[illegible] REPORT FOR COOK COUNTY
REPORT 4: MORTGAGE LOANS BY HMDA SAVINGS & LOANS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
3RES	RESERVE S&LA	56	2416	.07	.08
3RID	RIDGELAND S&LA	99	4760	.13	.16
3RIV	RIVERSIDE S&LA	96	4137	.13	.14
3ROY	ROYAL S&LA OF CHICAGO	167	3820	.16	.13
3SAU	SAUK PRAIRIE S&LA	3	126	----	----
3SUB	SUBURBAN FS&LA	3	112	----	----
3SEC	SECURITY FS&LA OF CHICAGO	229	9352	.30	.31
3SCR	SECURITY S&LA	223	8137	.29	.30
3SEC	SECOND FS&LA OF CHICAGO	436	9016	.57	.30
3SHL	FIRST FS&LA OF SOUTH HOLLAND	546	24508	.72	.80
3SKO	SKOKIE FS&LA	486	22080	.64	.74
3SMT	SUMMIT FIRST FS&LA	214	9845	.28	.33
3SOE	SOUTH END S&LA	176	5612	.23	.19
3SOW	SOUTH WEST FS&LA	316	16183	.42	.53
3STA	SAINT ANTHONY S&LA	120	4590	.16	.16
3STD	STANDARD FS&LA OF CHICAGO	861	29467	1.14	.97
3STP	SAINT PAUL FEDERAL S&LA	2604	101948	3.43	3.34
3STR	STERLING S&LA	144	5687	.19	.18
3SUB	SUBURBAN S&LA	21	536	.03	.02
3TAL	TALMAN FS&LA	6025	198519	7.93	6.51
3TEL	TELEGRAPH S&LA	349	18149	.46	.50
3TOW	TOWER FS&LA	161	6828	.21	.20
3UNI	UNITED S&LA	325	12140	.43	.40
3UNN	UNION FS&LA OF COOK COUNTY	528	20675	.70	.68
3UNT	UNITY SAVINGS	714	32607	.94	1.07
3UNV	UNIVERSAL S&LA	104	3226	.14	.11
3UPT	UPTOWN FS&LA OF CHICAGO	1266	54634	1.67	1.79
3WAS	WASHINGTON S&LA OF CHICAGO	56	976	.07	.03
3WCS	FIRST FS&LA OF WESTCHESTER	422	18123	.56	.59
3WIN	[illegible] S&LA	133	7032	.18	.23
3WLC	FIRST FS&LA OF WILL COUNTY	28	709	.03	.02
3WLM	FIRST FS&LA OF WILMETTE	851	41586	1.12	1.38
3WOR	WORTH FS&LA	152	5374	.20	.18
3WSN	WESTERN S&LA	207	10069	.27	.33
3WST	WEST TOWN S&LA	66	2316	.09	.08
		75976	3048853	100.00	100.00

REPORT C.4: Volume of Lending by HMDA S&L's

CONCENTRATION REPORT FOR COOK COUNTY
REPORT 5: AGGREGATE LOANS BY OTHER SAVINGS & LOANS

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S)	% NUMBER OF LOANS	% AMOUNT OF LOANS
4ALT	A. LINCOLN S.	3	135	.14	.17
4-AA	AUSTIN FED S&LA OF AMERICA	1	26	.05	.03
4ASC	AUSTIN FS&LA OF SCHAUMBURG	1	25	.05	.03
4BLW	BELLWOOD S&LA	33	1039	1.52	1.27
4CIT	CITIZENS FS&LA	516	17927	23.72	22.38
4CLB	COLUMBIA FS&LA	1	16	.05	.02
4CLT	CALUMET CITY FS&LA	3	76	.14	.10
4COL	COLONIAL S&LA	2	97	.09	.12
4CRA	CRAGIN S&LA	16	381	.74	.48
4CHC	CITIZENS FS&LA OF CHICAGO HTS	4	57	.18	.07
4DEA	PEOPLES S&LA	1	16	.05	.02
4FDE	FEDERAL S&LA OF DECATUR	4	127	.18	.16
4FDC	FEDERAL S&LA OF CHICAGO	2	31	.09	.04
4FJL	FEDERAL S&LA (DIV OF JOLIET FED.)	2	55	.09	.07
4FID	FIDELITY FS&LA	1	25	.05	.03
4FSA	FIRST FS&LA OF SCHAUMBURG	1	3	.05	----
4FEC	FIRST FS&LA OF EAST CHICAGO	43	1496	1.98	1.83
4FHA	FIRST FS&LA OF HAMMOND	1	25	.05	.03
4FMA	FIRST FS&LA OF MAYWOOD	1	21	.05	.03
4FOT	FIRST FS&LA OF OTTAWA	16	984	.74	1.20
4FAT	FINANCIAL SA	1	47	.05	.06
4GAF	GREAT AMERICAN FS&LA	1	40	.05	.05
4GIR	GIRARD FS&LA	52	4696	2.39	5.74
4GRA	GRAGIN FS&L	1	30	.05	.04
4HHP	HIGHLAND PARK FS&LA	26	1160	1.20	1.42
4HMC	HUMBOLDT FS&LA OF CHICAGO	3	72	.14	.09
4ILF	ILLINOIS FS&LA OF CHICAGO	5	199	.23	.24
4ILL	ILLINOIS S&LA	60	2550	2.76	3.12
4LAK	LAKE FS&LA	3	73	.14	.09
4LOC	LINCOLN FS&LA OF COOK COUNTY	1	36	.05	.04
4LGP	FIRST SAVINGS OF LAGRANGE PARK	41	1632	1.89	2.00
4LAP	LAKE SHORE PRESS S&LA	23	797	1.06	1.00
4LNT	LEYDEN S&LA	1	17	.05	.02
4MLF	MELROSE AND MAYWOOD S&LA	33	1625	1.52	2.03
4MLT	MIDLOTHIAN S&LA	236	7503	10.76	9.07
4MOR	MORRIS S&LA	3	116	.14	.14
4NAH	NATIONAL HOME S&LA	1	36	.05	.04
4NOH	NORTHWESTERN S&LA OF HEGEWISCH	1	50	.05	.06
4PIT	PIONEER FS&LA	1	35	.05	.04
4RIA	FIRST STATE OF CHICAGO	1	36	.05	.05
4RRV	ROCK RIVER S&LA	2	132	.09	.16
4RVD	RIVERDALE S&LA	1	41	.05	.05
4SCL	SECURITY FS&LA OF LAKE COUNTY	6	194	.28	.24
4SUB	SOUTH SUBURBAN FS&LA	914	33845	42.42	41.36
4TRI	TRI-CITY S&LA	17	477	.78	.58
4UOF	UNITY SAVINGS OF OAK FOREST	1	37	.05	.05
4UNP	UNITY SAVINGS OF PARK FOREST	84	2372	3.86	2.90
4UTY	UNITY FS&LA	5	203	.23	.25
4XXX	CENTRAL DUPAGE FS&LA	1	42	.05	.05

REPORT C.5: Volume of Lending by Other S&L's

```
                                         COMPLETENESS REPORT FOR COOK COUNTY
                                        REPORT 5: MORTGAGE LOANS BY OTHER SAVINGS & LOANS

                                                      AMOUNT          %          %
                                                        OF          NUMBER     AMOUNT
                                            NUMBER    LOANS           OF         OF
CODE          LENDER                        LOANS    (1000'S)       LOANS      LOANS

                                             2175        60091      100.00     100.00
```

REPORT C.5: Volume of Lending by Other S&L's

COMPLETENESS REPORT FOR COOK COUNTY
REPORT 6: MORTGAGE LOANS BY MORTGAGE COMPANIES

CODE	LENDER	NUMBER LOANS	AMOUNT OF LOANS (1000'S).	% NUMBER OF LOANS	% AMOUNT OF LOANS
$ADV	ADVANCE MORTGAGE CORP.	446	15995	6.03	6.61
$ALL	ALLSTATE ENTERPRISES, INC.	34	171	.46	.07
$AMF	AMERICAN FLETCHER MORTGAGE CO., INC	1	150	.01	.06
$BAN	BANCO MORTGAGE CO.	132	4005	1.78	1.66
$BBC	B. B. COHEN & CO.	1	105	.01	.04
$CIT	CITIZENS MORTGAGE CORP.	226	6092	3.06	2.52
$CRO	CROWN MORTGAGE CO., INC.	442	15835	5.98	6.54
$DON	DONALD ????? MORTGAGE CO.	109	2758	1.47	1.14
$EVE	EVERGREEN?? INC.	368	12730	4.97	5.26
$FRA	FRAZIER AND KRAPER	1	46	.01	.02
$GAF	GREAT AMERICAN FUNDING CORP.	941	30293	12.72	12.50
$GEN	GENERAL MORTGAGE CORP.	176	4795	2.38	1.98
$GLK	GREAT LAKES MORTGAGE CORP.	534	19644	7.22	8.12
$GOA	GREAT OAKS MORTGAGE CORP.	300	9730	4.06	4.02
$GUI	GUILD MORTGAGE CO.	187	6220	2.53	2.57
$HAR	HARBOR MORTGAGE CO.	5	544	.07	.23
$HFP	H. F. PHILIPBORN AND CO.	30	2142	.41	.89
$HOF	HOFFMAN MORTGAGE AND FINANCE CO.	4	170	.05	.07
$INT	INTERNATIONAL MORTGAGE CO,	68	2650	.92	1.10
$JBH	JAMES B. HAGGERTY AND CO.	251	5845	3.39	2.42
$JFM	JAMES F. MESSINGER AND CO., INC.	184	5610	2.49	2.32
$KAN	KANISON MORTGAGE AND FINANCIAL CORP	4	203	.05	.08
$LAK	LAKE MORTGAGE CO., INC.	2	53	.03	.02
$LON	LUMAS AND NETTLETON CO.	211	8694	2.85	3.59
$MIS	MORTGAGE INVESTMENT SECURITIES, INC	66	2859	.89	1.18
$MOD	MODERN AMERICAN MORTGAGE CORP.	351	15463	4.75	6.39
$MOA	MORTGAGE ASSOCIATES, INC.	1283	26912	17.34	11.12
$NAT	NATIONAL HOMES ACCEPTANCE CORP.	117	5656	1.58	2.34
$PEN	PENNAMCO INC.	37	1617	.50	.68
$PWM	PERCY WILSON MORTGAGE & FIN CORP	597	24911	8.07	10.29
$PRS	PRESIDENTIAL MORTGAGE CORP.	4	400	.05	.17
$SEC	SECURITY MORTGAGE CORP (OAK FOREST)	21	694	.28	.29
$SEM	SEAVER MORTGAGE CORP.	1	10	.01	.01
$SEP	SECURITY PACIFIC MORTGAGE CORP.	90	2946	1.22	1.21
$SFO	S&O FED MORTGAGE CORP.	1	56	.01	.02
$SJS	SAINT JOSEPH MORTGAGE CO., INC.	157	3660	2.12	1.51
$URO	UNION REALTY MORTGAGE CO., INC.	1	115	.01	.05
$USH	U. S. HOME MORTGAGE CORP.	1	36	.01	.02
$VET	VETERANS MORTGAGE CO OF ILL.	1	23	.01	.01
$WKI	WALLICK & KELLER MORTGAGE CO,INC.	27	672	.37	.28
		7397	242013	100.00	100.00

REPORT C.6: Volume of Lending by Mortgage Companies

APPENDIX D

SAN DIEGO COUNTY
FILE AND REPORT SPECIFICATION

This appendix contains the specifications for the automated file of the San Diego County data. The file specification is defined in terms of the field names and their starting and ending locations in the automated data base. A table of data element descriptions is provided in Table D-1. The codes used to identify individual title insurance companies, banks and savings and loan associations are shown in Table D-II, D-III and D-IV, respectively.

JRB ASSOCIATES, INC.

FILE SPECIFICATION

NAME SAN DIEGO SALES		**PROJECT** HMDA STUDY	
MEDIUM DISK	**VOLUME**	**PREPARED BY** DJM	**REVIEWED BY** JER
LRECL & BLKSIZE 125	**RETENTION** PERMANENT	**DATE** 1 May 1978	**PAGE** 1 of 2
TYPE FIXED	**FORMAT** ASCII	**CREATE/UPDATE PROGRAMS** N/A	
RECORD SPECIFICATION		**NAME** SAN DIEGO SALES	**% VOLUME** 100%

LEVEL	FIELD NAME	START	END	PICTURE	REMARKS
01	SAN-DIEGO-SALES-REC	1	125		
05	PARCEL-NUMBER	1	10	9(10)	
05	EXEMPTION-CODE	11	11	x(1)	
05	TAX-RATE-AREA	12	13	x(2)	
05	ADDRESS	14	36	x(23)	
05	BUYER	37	42	x(6)	
05	MAP	43	46	x(4)	
05	DOCUMENT-TYPE	47	47	x(1)	
05	DOCUMENT-NUMBER	48	54	x(7)	
05	MONTH	55	55	x(1)	
05	YEAR	56	57	x(2)	
05	ZONING	58	62	x(5)	
05	NUMBER-OF-UNITS	63	65	9(3)	
05	AREA	66	72	9(5)V99	
05	IMPROVEMENTS	73	81	9(9)	
05	FULL-VALUE	82	90	9(9)	
05	PERSONAL-PROPERTY-CODE	91	91	x(1)	
05	TITLE-COMPANY	92	93	x(2)	
05	FIRST-TD-AMOUNT	94	102	9(9)	

DFF 2

JRB ASSOCIATES, INC.		**FILE SPECIFICATION**	
NAME SAN DIEGO SALES		**PROJECT** HMDA STUDY	
MEDIUM DISK	**VOLUME**	**PREPARED BY** DJM	**REVIEWED BY** JER
LRECL & BLKSIZE 125	**RETENTION** PERMANENT	**DATE** 1 May 1978	**PAGE** 2 of 2
TYPE FIXED	**FORMAT** ASCII	**CREATE/UPDATE PROGRAMS** N/A	
RECORD SPECIFICATION		**NAME** SAN DIEGO SALES	**% VOLUME** 100%

LEVEL	FIELD NAME	START	END	PICTURE	REMARKS
05	LENDER-TYPE	103	103	x(1)	
05	LENDER-ID	104	105	x(2)	
05	SECOND-TD-AMOUNT	106	112	9(7)	
05	TRANSFER-AMOUNT	113	121	9(9)	
05	LOAN-TYPE	122	122	x(1)	
05	FULL-NOT-FULL-INDICATOR	123	123	x(1)	
05	PORTION-MULTIPLE-CODE	124	124	x(1)	
05	FILLER	125	125	x(1)	

DATA ELEMENT DEFINITIONS

PARCEL NUMBER	-	Assessor's Parcel Number
EXEMPTION CODE	-	Nature of tax exemption for prior owner: H-Homeowner B-Business Inventory V-Veteran W-Welfare R-Church O-Orphanage C-Cemetery S-SSCRA E-College M-Miscellaneous
TAX RATE AREA	-	Incorporated city or unincorporated school district in which property is located
ADDRESS OR LEGAL DESCRIPTION	-	Address of subject property. If no address, subdivision lot and block identification given. For property not subdivided, township, range and section are given
BUYER	-	The name of the buyer and the number of parties involved. Private parties are identified by the first four letters, commercial buyers by their first three.
MAP	-	Subdivision map number
DOCUMENT TYPE	-	Coded nature of transfer: C-Regular Owner Change D-Death Certificate Q-Quit Claim X-Unresearched R-Recorded Contract O-Other U-Unrecorded Contract
DOCUMENT NUMBER	-	Number on the grant deed which transferred the ownership of the property.
MONTH	-	Month deed was recorded. January through September encoded as 1-9. October, November, and December as O, N, and D
YEAR	-	Year deed was recorded. In this file always '77'
ZONING	-	Property's zoning category
NUMBER OF UNITS	-	Number of living units
AREA	-	Acreage if more than one acre, otherwise square footage

TABLE D-1 (Continued)

IMPROVEMENTS	-	Assessor's value on improvements (e.g., pool, fence, etc.)
FULL VALUE	-	Assessor's value on the real estate (land and building)
PERSONAL PROPERTY CODE	-	A 'P' indicates that there is personal property.
TITLE COMPANY	-	Code identifying title company issuing the title policy. See Table D-II.
FIRST TD AMOUNT	-	The amount represented by the first concurring trust deed following the grant deed. It is not necessarily a first trust deed. The first trust deed may have been assumed, and will not appear anywhere in the public records connected with the transfer of the subject property.
LENDER TYPE	-	Code identifying lender category: 1-Bank 2-Escrow 3-Mortgage 4-Savings&Loan 5-State Cal Vet 6-Title 7-Miscellaneous Co. 8-Private Party 9-Seller
LENDER ID	-	Code identifying individual bank (See Table D-III) or savings and loan (See Table D-IV)
SECOND TD AMOUNT	-	Amount of the second concurring trust deed and all other trust deeds following the first concurring trust deed
TRANSFER AMOUNT	-	Transfer value according to the value represented by the county documentary stamps. The transfer tax only represents the cash payment and trust deeds If there is an assumption, this field will not have the full value.
LOAN TYPE	-	Coded indentification of loan category: C-Conventional F-FHA V-VA G-GI S-State Cal Vet
FULL NOT-FULL INDICATOR	-	'F' indicates transfer tax value represents full purchase price. 'N' indicates transfer tax value is not full purchase price.
PORTION MULTIPLE CODE	-	Code indicating actual number of parcels on the grant deed.

TABLE D-1

TITLE INSURANCE COMPANIES

CA = 1st California
CE = First Central
CL = California Land
CH = Chicago
EM = Empire
CO = Comm
FI = First American
LA = Land Title
SA = Safeco
ST = Stewart
TE = Terra
TI = Title Insurance
TR = Transamer

Table D-II

BANKS

AB = Alex Brown
AM = American City Bank
BA = Bank of America
BC = Bank of California
BL = Bank of A. Levy
CA = California Federal
CB = Canadian Bank
CC = California Canadian
CE = Central
CF = California First
CH = California Heritage
CI = Citizens State
CM = Commerce
CN = Crocker National
CO = Commercial National
CW = Citizens Western
FL = Federal Land Bank
FN = First National
GR = Grossmont
HB = Home Bank
IM = Imperial Bank
IN = Independence
IR = Bank of Irvine
LA = La Jolla

LE = Bank of A. Levy
LL = Lloyd's Bank
LO = Chartered Bank of London
MA = Mexican American
MB = Mechanics Bank
MU = Manufacturers Bank
NA = National City
NC = North County
PB = Peninsula Bank
PC = Pacific Coast
SA = Sanwa
SD = San Diego Trust
SP = Security Pacific
SU = Sumitomo
SW = Southwest
TR = TransWorld
UB = Union Bank
UC = United California
UF = Union Federal
VI = Vista National
VN = Valley National
WC = West Coast National
WE = Westlands
WF = Wells Fargo

Table D-III

SAVINGS AND LOAN ASSOCIATIONS

AL = Allstate
AM = American
AN = Anaheim
BR = Brentwood
BH = Beverly Hills
CA = California Federal
CE = Central Federal
CI = Citizens
CO = Coast
CV = Chula Vista
DO = Downey
EW = East West Federal
FB = Fallbrook
FF = 1st Federal
FI = Fidelity Federal
FN = Financial
GI = Gibralter
GF = Glendale Federal
GW = Great Western
HA = Hawthorne
HF = Home Federal
HO = Homestead
HS = Home Savings
IS = Imperial Savings
KE = Keystone
LA = La Jolla Federal
LF = Laguna Federal
LI = Lincoln

LO = Los Angeles Federal
MA = Mariners
ME = Mercury
MU = Mutual
OC = Oceanside
PA = Palomar
PE = Peoples
PO = Pomona
PR = Prudential
PS = Progressive Savings
PV = Provident (Riverside)
RE = Republic
RS = Rancho Santa Fe
SB = Santa Barbara
SD = San Diego Federal
SE = Security
SF = Santa Fe
SG = Silver Gate
SM = State Mutual
SN = Santa Ana
SO = Southern California
SP = Santa Paula
ST = State
SW = Southwest
UF = Union Federal
US = US Life Savings
VF = Valley First
WF = Western Federal
WS = World Savings

Table D-IV

APPENDIX E

ERIE COUNTY
FILE AND RECORD SPECIFICATION

This appendix contains specifications for the automated file of the Erie County data. The file specification is defined in terms of the field names and their starting and ending locations in the automated data base. The codes used to identify types of lenders, individual lenders, and localities are shown in Table E-I, E-II and E-IV, respectively.

JRB ASSOCIATES, INC.		**FILE SPECIFICATION**	
NAME ERIE COUNTY MORTGAGES		**PROJECT** HMDA STUDY	
MEDIUM DISK	**VOLUME**	**PREPARED BY** DJM	**REVIEWED BY** JER
LRECL & BLKSIZE 20	**RETENTION** PERMANENT	**DATE** August 1, 1978	**PAGE** 1 of 1
TYPE FIXED	**FORMAT** ASCII	**CREATE/UPDATE PROGRAMS** N/A	
RECORD SPECIFICATION		**NAME** ERIE COUNTY MORTGAGE	**% VOLUME** 100

LEVEL	FIELD NAME	START	END	PICTURE	REMARKS
01	MORTGAGE-RECORD	1	20		
05	LENDER-TYPE	1	1	X	SEE TABLE E-I
05	LENDER-ID	2	4	X(3)	SEE TABLE E-II
05	LOAN-AMOUNT	5	11	9(7)	
05	LOCALITY	12	14	X(3)	SEE TABLE E-III
05	BDLJ-ISSUE-DATE	15	20	9(6)	FORMAT: MMDDYY

LENDER TYPES

1. HMDA Banks
2. Non-HMDA Banks
3. HMDA Savings and Loan Associations
4. Non-HMDA Savings and Loan Associations
5. Miscellaneous Companies
6. Private Parties

TABLE E-I

ERIE COUNTY LENDER CODE LIST

1ASB = Alden State Bank
4AKS = Akron Savings and Loan
1BOA = Bank of Akron
2BBF = Bank of Buffalo
2BCT = Bank of Cattaraugus
2BHL = Bank of Holland
1BNY = Bank of New York
1BTC = Bankers Trust Company
1BFS = Buffalo Savings Bank
1CHS = Chase Manhattan
1CMC = Chemical Bank
1CIT = Citibank-New York State
1CTZ = Citizens Central Bank
2DNB = Dominion National Bank
4ESL = Erie County S&L
3EFS = Erie Federal S&L
1EIR = Erie Savings Bank
IENB = Evans National Bank of Angola
2FLS = Fed Land Bank Springfield
3FIL = Fillmore S&L
2FNB = Finger Lakes National Bank
2FFS = First Fed Savings Bank
3FBU = First Fed S&L - Buffalo
3FHA = First Fed S&L - Hamburg
3FRO = First Fed S&L - Rochester
2FTB = First Trust Union Bank
1LIB = Liberty Nat'l Bank & Trust
2LBR = Lincoln 1st Bank of Rochester
1LOC = Lockport Savings Bank
1MTB = Manufacturers and Traders
1MHT = Manufacturers Hanover
1MAR = Marine Midland
2MNS = Monroe Savings Bank
1NCB = Niagara County Savings
2NFS = Niagara 1st Savings Bank
3NSL = Niagara First S&L
4NFR = Niagara Frontier Bank
4NIP = Niagara Permanent S&L
4SSL = Salamanca Federal S&L
2SBA = State Bank of Albany
1WNS = Western New York Savings
2WYB = Wyoming County Bank
5 = Miscellaneous Companies
6 = Private Parties

TABLE E-II

JRB Associates, Inc.

ERIE COUNTY LOCALITY CODE LIST

AKR = Akron
ALD = Alden
AMH = Amherst
ANG = Angola
AUR = Aurora
BRN = Brant
BST = Boston
BDL = Blasdell
BUF = Buffalo
CHK = Cheektowaga
CLA = Clarence
COL = Colden
CLN = Collins
CND = Concord
DEP = Depew
DBY = Darby
DAR = Darien
EAU = East Aurora
EDN = Eden
EGG = Eggertsville
ELM = Elma
EVN = Evans
FLV = Franklinville
GLW = Glenwood
GRI = Grand Island
HAM = Hamburg
HOL = Holland
HMW = Holmwood
IRV = Irving
KEN = Kenmore
LAK = Lackawanna
LVW = Lakeview
LAN = Lancaster
MAR = Marilla
NES = Newstead
NCL = Northcollins
OPK = Orchard Park
POL = Poland
SAR = Sardinia
SEN - Seneca
SLO = Sloan
SPV = Springville
SNY = Snyder
TON = Tonawanda
WAL = Wales
WFA = W Falls
WSN = West Seneca
WMV = Williamsville
XXX = Other

TABLE E-III

APPENDIX F

COOK COUNTY
FILE AND RECORD SPECIFICATION

This appendix contains the specifications for the automated file of the Cook County data. The file specification is defined in terms of the field names and their starting and ending locations in the automated data base.

JRB ASSOCIATES, INC.	**FILE SPECIFICATION**

AME CHICAGO-MORTGAGES		**PROJECT** HMDA STUDY	
EDIUM DISK	**VOLUME**	**PREPARED BY** DJM	**REVIEWED BY** JER
RECL & BLKSIZE	**RETENTION** PERMANENT	**DATE** JULY 10, 1977	**PAGE** 1 of 1
YPE FIXED	**FORMAT** ASCII	**CREATE/UPDATE PROGRAMS** N/A	
RECORD SPECIFICATION		**NAME** CHICAGO MORTGAGES	**% VOLUME** 100%

EVEL	FIELD NAME	START	END	PICTURE	REMARKS
01	LENDER-AGGREGATE	1			
05	LENDER-TYPE	1	1	9(1)	CODES DEFINED ON REPORT
05	LENDER-ID-CODE	2	4	X(3)	INCLUDED IN APPENDIX C.
05	NUMBER-OF-LOANS	5	8	9(4)	
05	AMOUNT-OF-LOANS	6	19	9(9)V99	

F2

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

DOUBLE COUNTING

For
Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JWB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JWB Project 2-800-04-118

TABLE OF CONTENTS

Page

FOREWORD i

SUMMARY iii

1. INTRODUCTION 1-1
  1.1 Purpose 1-1
  1.2 Rationale for Estimating Double Counting 1-2
  1.3 Methodology 1-3
    1.3.1 Work Plans 1-3
    1.3.2 The Questionnaire 1-4
    1.3.3 The Survey 1-5

2. ANALYSIS AND FINDINGS 2-1
  2.1 Survey Results 2-1
    2.1.1 Type of Response 2-1
    2.1.2 Volume of Sales and Purchases by Banks in Chicago 2-3
    2.1.3 Volume of Sales and Purchases by Savings and Loan Associations in Chicago 2-10
  2.2 Estimation of Double Counting 2-15
    2.2.1 Estimated "Worst Case" of Double Counting for the Chicago SMSA 2-17
    2.2.2 Estimated "Worst Case" of Double Counting for San Diego SMSA 2-19
    2.2.3 Estimated "Worst Case" of Double Counting for Buffalo SMSA 2-20
    2.2.4 Conclusion on Further Validation 2-21
  2.3 Problems in Reporting 2-21

REFERENCES R-1

APPENDIX A A-1

APPENDIX B B-1

APPENDIX C C-1

LIST OF TABLES

Page

TABLE S.1: Summary of "Worst Case" Estimate of Double Counting by SMSA iv

TABLE 1: Survey Response Rate 2-2

TABLE 2: Type of Response (i.e., Positive or Negative) 2-4

TABLE 3: Maximum Potential Amount of Double Counting by Respondent Banks Originating and Selling Loans in Chicago 2-6

TABLE 4: Maximum Potential Amount of Double Counting by Respondent Banks Purchasing Loans in Chicago 2-7

TABLE 5: Estimate of Proper and Improper Disclosure Reporting by Banks 2-9

TABLE 6: Maximum Potential Amount of Double Counting by Respondent Savings and Loan Associations Originating and Selling Loans in Chicago 2-11

TABLE 7: Maximum Potential Amount of Double Counting by Respondent Savings and Loan Associations Purchasing Loans in Chicago 2-12

TABLE 8: Estimate of Proper and Improper Disclosure Reporting by S & L's 2-14

TABLE C1: Summary of Responses From Banks C-4

TABLE C2: Participations Sold by Banks C-5

TABLE C3: Participations Purchased by Banks C-6

TABLE C4: Individual Loans Sold by Banks C-7

TABLE C5: Individual Loans Purchased by Banks C-8

TABLE C6: Summary of Responses From Savings and Loan Associations C-9

TABLE C7: Participations Sold by Savings Loan Associations . . . C-10

TABLE C8: Participations Purchased by Savings Loan Associations C-11

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of the study of double counting is to estimate the extent to which mortgage loans secured by real residential properties in the three Standard Metropolitan Statistical Areas (SMSAs) of the study were double counted (i.e were originated and sold during fiscal year 1977 and were included on the disclosure statements of both the selling [i.e., originating] and the purchasing depository institution in the same SMSA).

SCOPE AND METHODOLOGY

A survey questionnaire was prepared and sent to 413 banks and 63 savings and loan associations located in the Buffalo Chicago and San Diego SMSAs to gather information on loans that were sold and purchased among these depository institutions Responses to the survey were received from 302 banks and 43 savings and loan associations and analysed to estimate double counting. The survey data were also studied to determine whether depository institutions were properly reporting purchased loans and loans that were both originated and sold during the same fiscal year.

Only 13 of the 302 responding banks and 14 of the 43 responding savings and loan associations reported sales or purchases with other depository institutions located in the same SMSA. The responses were validated by comparing information from the selling depository institution against information from the purchasing institution and this validation produced only seven confirmed cases where originations and purchases, were double counted. Most of the reported sales or purchases could not be validated because of lack of responses or inconsistencies in responses, so a "worst case" analysis was performed to determine whether it was advisable to perform an extensive follow-up to validate the entire set of responses.

The results of the "worst case" analysis were analyzed in conjunction with the volume of purchases indicated on the disclosure statement of all depository institutions in the three SMSAs, and it was concluded that double counting was not a major source of error in aggregating originations and purchases in any of the three SMSAs. This led to the further conclusion that the expense involved in further validation was not warranted. Consequently, the final conclusions on double counting are based on the results of the "worst case" analysis.

FINDINGS

Both the survey responses and the home mortgage disclosure statements indicate that the volume of sales and purchases of mortgage loans among depository institutions in the same SMSA is negligible when compared to the total mortgage lending activity. The results of the "worst case" estimates of double counting for each of the three SMSAs are summarized in Table S.1.

TABLE S.1: SUMMARY OF "WORST CASE" ESTIMATE OF DOUBLE COUNTING BY SMSA

SMSA	"Worst Case" Double Counting ($ millions)	Volume of Loans in Disclosure Statements ($ millions)	"Worst Case" Percentage of Double Counting
Buffalo	0	416	0.0
San Diego	4.6	2,600	0.18
Chicago	163.7	5,400	3.0

No sales or purchases of mortgage loans were reported by depository institutions in the Buffalo SMSA, either in their disclosure statements or in their survey responses. Therefore, no evidence of double counting was found in the Buffalo SMSA.

The depository institutions in San Diego reported in their 1977 disclosure statements $40.9 million in purchases of mortgage loans secured by single family and multi-family properties. Our analysis of the survey responses indicates a "worst case" estimate of double counting to be $4.6 million. The total volume of mortgage and home improvement loans that were secured by single family and multi-family properties in the San Diego SMSA and that were originated by depository institutions in fiscal year 1977 was $2.6 billion. On this basis, the "worst case percentage of double counting was estimated to be 0.18 percent in the San Diego SMSA.

The Federally-chartered depository institutions in the Chicago SMSA reported in their 1977 disclosure statements $51 million in purchases of mortgage loans secured by single family and multi-family properties. Purchase information was not available in the disclosure statements of the state-chartered institutions Our analysis of the survey responses indicates a "worst case" estimate of double counting to be $163.7 million. The total volume of mortgage and home improvement loans that were secured by single family and multi-family properties in the Chicago SMSA and that were originated by depository institutions in fiscal year 1977 was $5.4 billion. On this basis, the "worst case" percentage of double counting was estimated to be 3.0 percent in the Chicago SMSA.

As a by-product of the double counting investigation, information was obtained on the extent to which loans that were purchased or originated and sold in the same fiscal year were being properly reported on disclosure statements. The only significant evidence of improper reporting of these transactions between depository institutions was in the Chicago SMSA. Improper reporting of such transactions was not a major source of error in home mortgage disclosure data. The dollar amount of improper reporting was $25.5 million, and this amount is negligible compared to the $5 billion of mortgage lenders subject to disclosure However the $25 million that was not properly reported was 36 percent of the dollar volume of all such transactions Improper reporting of purchases of interests in participations was the major source of error Errors of this type could become significant, if depository institutions purchased and failed the report properly a large volume of interests in participations from lendings other than depository institutions. An investigation of this issue was beyond the scope of this study.

The results of the "worst case" analysis were analyzed in conjunction with the volume of purchases indicated on the disclosure statement of all depository institutions in the three SMSAs, and it was concluded that double counting was not a major source of error in aggregating originations and purchases in any of the three SMSAs. This led to the further conclusion that the expense involved in further validation was not warranted. Consequently, the final conclusions on double counting are based on the results of the "worst case" analysis.

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The study findings are summarized as follows:

- Double counting is not a major source of error in aggregating originations and purchases to estimate the total mortgage activity in any of the three SMSAs.

- Institutions participating in the survey in the Chicago SMSA did not properly report 36 percent of the dollar volume of loans that were purchased from other depository institutions in the same SMSA or that were originated and sold to depository institutions in the same SMSA. This volume alone is not a significant source of error in disclosure reporting. This type of improper reporting could, however, be a significant source of error, if depository institutions made and failed to report properly a large volume of such transactions from lenders other than depository institutions.

CHAPTER 1

INTRODUCTION

1.1 PURPOSE

The purpose of the double counting study is to present estimates of the extent to which mortgage loans secured by residential real property were double counted in the fiscal year 1977 disclosure statements prepared under the Home Mortgage Disclosure Act or a state exemption by depository institutions in the three Standard Metropolitan Statistical Areas (SMSAs) in the study (i.e., Chicago, Buffalo, and San Diego). Double counting is defined as occurring when:

> *One institution originates a mortgage loan for residential property located in a given SMSA during its 1977 reporting period and includes this loan in ts disclosure statement for that SMSA and where the loan is sold to another institution subject to the Act and where this second institution is located in the same SMSA and includes the loan as a purchase in its disclosure statement for the SMSA. In this part of the study, the "1977" reporting period was considered to be calendar year 1977 for institutions with fiscal year closure dates on December 31, 1977 and for institutions with odd closure dates (i.e other than December 31, 1977) it was considered to be their fiscal year with an ending date between March 1, 1977 and February 28, 1978.*

As a by-product of the double counting investigation, information was obtained which indicated that some depository institutions were not properly disclosing information on loans they either sold or purchased during their fiscal reporting year. Although a complete analysis of improper reporting was beyond the scope of the double counting study, findings on this topic are presented to the extent that the available data permit.

1.2 RATIONALE FOR ESTIMATING DOUBLE COUNTING

An estimate of the extent of double counting is needed to understand the significance of the information obtained when all of the disclosure statements prepared by the depository institutions within a given SMSA are compiled and aggregated to derive an estimate of the total mortgage loan activity represented by these institutions. In preparing their disclosure statements, depository institutions that are subject to the Act are required to itemize separately loans that were originated and loans that were purchased. Further, an institution that both originated and sold a loan in the same fiscal year is required to include the loan in its disclosure statement as an origination. If the purchasing institution were subject to the Act then this institution is also required to include the loan in its disclosure statement, but as a purchased loan. In these cases, the loan would be counted twice or double counted (i.e., once for each institution) in compiling the total mortgage loan activities represented by those depository institutions. Conceivably, a mortgage loan could be sold (and purchased) more than once in a single reporting period. However, such a transaction is unlikely to occur in a given year among more than two depository institutions in the same SMSA; consequently, these were not investigated. By definition, loans purchased from sellers not subject to the Act or from depository institutions located outside of the SMSA (even those subject to the Act) would not be double counted. Personnel at the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation who are knowledgeable about the secondary mortgage market felt it was likely that most of the purchased loans included in an institution's statement were either obtained from sellers outside of the SMSA or from sellers not subject to the Act. Nevertheless estimates of the extent of double counting were needed to allow a proper interpretation of the mortgage originations and purchases that were combined to indicate the total mortgage activity of the depository institutions in the three SMSAs of the study.

Exemptions granted to state-chartered institutions cause a further complication. Prior to the repeal of Illinois Public Act 76-632, subject state-chartered institutions were not required to separate originations from purchases in compiling the state disclosure statement. Instead, these institutions prepared one report that combined both originations and purchases into one "disbursements" statement (See Appendix A). In cases such as these, it is impossible to determine the relative portion due to originations or to purchases. For these institutions, the total mortgage loan activity can only be estimated in terms of the combined originations and purchases. Understanding the extent of double counting takes on added significance when this occurs.

1.3 METHODOLOGY

The methodology used in conducting this study involved the following eight steps:

1. The preparation of an initial work plan
2. The preparation of a revised work plan
3. The preparation of a Sales and Purchase Questionnaire
4. The mailing of questionnaires to depository institutions
5. The receipt and control of completed questionnaires and the compilation of data from the questionnaires
6. An analysis of the data on sales and purchases to estimate the incidence of double counting and the extent to which institutions are not properly reporting loan information on their disclosure statements
7. A follow-up discussion with selected respondents to verify or clarify responses and to identify problems in preparing the disclosure statements
8. The preparation of this report.

1.3.1 Work Plans

The approach proposed in the initial work plan involved the selection of a sample from the institutions that reported purchased loans in their 1977 fiscal year disclosure statements. The selected institutions were to be asked to submit information identifying the seller and the date of the loan origination for each loan they purchased and subsequently included in their disclosure statements. For each loan they purchased and included in their disclosure statement, the selected institutions were to be asked to submit information to identify the seller and to specify the date the seller originated the loan. This approach was not adopted because of anticipated difficulties in attempting to trace loans from the purchaser side. These difficulties included the disclosure statements filed by state-chartered institutions with the State of Illinois. Because these reports do not separate originations and purchases, it was not possible to identify the institutions that included purchased loans in their disclosure statements.

Consequently, the work plan was revised to use a direct mail survey to determine the extent to which double counting occurred. A questionnaire was developed and submitted with a cover letter from the Chairman of the Federal Home Loan Bank Board (in the case of savings and loan associations) and the Chairman of the Federal Deposit Insurance Corporation (in the case of banks).

1.3.2 The Questionnaire

The questionnaire on sales or purchases of mortgage loans (see Appendix B) requested institutions to furnish information in two major categories: individual mortgage loans and participations.

Individual Mortgage Loans: Part A of the questionnaire posed six questions on the sales and purchases of individual mortgage loans. In response to these six questions, institutions were asked to provide information on each mortgage loan transaction (i.e., sales or purchases) where:

1. The loan was for residential real property located in the same SMSA as the respondent.
2. The loan was both originated and sold in "fiscal year 1977."
3. The sale or purchase was with another savings and loan association or a bank that was also located in the same SMSA as the respondent and that was subject to Federal or state disclosure requirements.

For a loan to be double counted, all three of the above conditions must obtain, and, in addition, both the seller and the purchaser must have reported the loan on their disclosure statement in fiscal year 1977.

Participations: Part B of the questionnaire posed three additional questions on the sales and purchases of participations. Participations arise when two or more entities (e.g., depository institutions) jointly invest in a loan or a number of loans, and where each holds interests in (i.e., participates in) some specified percentage of the amount of the loan or loans. Regulation C in Section 203.4(a)(3) requires that the number of loans and dollar amounts to be included in the disclosure report shall include the "original principal amounts of loans orginated by the institution to the extent of its interest, where the loan is made jointly or cooperatively, and the unpaid principal balances of loans purchased by the depository institution, to the extent of its interest in such purchased loans." Thus depository institutions that originate a joint or cooperative participation (with other institutions) secured by residential real property are required to report the amount of their interest (i.e. share) in the participation in their disclosure statement. In addition, depository institutions that purchase an interest in a participation secured by residential real property are required to report, in their disclosure statement, the amount of the unpaid principal balance they purchased. As will be shown later in Chapter 2 these participations account for more than one-half of the volume of the sales and purchases of mortgage loans.

1.3.3 The Survey

The Federal Home Loan Bank Board selected the savings and loan associations to participate in the survey in each of the three SMSAs on the basis of information obtained from Section G of the Semiannual Financial Report submitted by depository institutions.[1] In Section G, depository institutions indicate the number and amount of whole loans and participations that were sold or purchased during the six months reporting period. Only associations that were identified from Section G information as having sold or purchased individual loans in either or both of the two six month reporting periods spanning 1977 were included in the survey. A total of 63 savings and loan associations were selected on this basis. A total of 100 associations that indicated (in Section G) the sale or purchase of participations (but not individual loans were not included in the survey, and 90 of these associations were located in the Chicago SMSA. On May 18, 1978, the Federal Home Loan Bank Board mailed the Chairman's letter and questionnaire to the 63 associations selected for the survey.

Since the Federal Deposit Insurance Corporation did not have information on the commercial or mutual savings banks sales or purchases of whole loans or participations, the Chairman's letter and questionnaire were sent on June 1, 1978, to all 413 banks in the three SMSAs of the study.

The completed questionnaires were returned to the Federal Home Loan Bank Board or the Federal Deposit Insurance Corporation which, in turn, provided them to the JRB study team. Each response was logged in, reviewed for consistency, and tabulated. By September 14 1978, approximately two-thirds of the banks and savings and loan associations had responded to the survey. Responses to the survey were received from 302 banks and 43 savings and loan associations and analyzed to estimate double counting and the extent to which loans were not included on disclosure statements. Only 13 of the 302 responding banks and 14 of the 43 responding savings and loan associations reported sales or purchases of loans with other depository institutions located in the same SMSA. These responses were validated by comparing information from the selling depository institution against information from the purchasing institution, and this validation produced only seven confirmed cases where originations and purchases could be validated while all other cases could not be validated because of lack of responses or inconsistencies in responses A "worst case" analysis was performed based on the assumption that all of the invalidated sales or purchases were double counted to determine whether the effort required for further validation was warranted. The results of the "worst case" analysis were studied in conjunction with the volume of purchases and originations indicated on disclosure statements and it was concluded that double counting is not a major source of error in aggregating originations and purchases in any of the three SMSAs. Consequently it was concluded that the expense involved in further validation was not warranted, and the final conclusions on double counting were based on the results of the "worst case" analysis.

Representatives of the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation agreed to undertake follow-up discussions with several survey respondents to verify and clarify their survey responses and to identify problems associated with reporting on the Home Mortgage Disclosure Act reports. Information obtained in these follow-up discussions was provided to JRB in May 1979 and incorporated into this report.

In Chapter 2, we present our findings on the probable incidence of double counting. These findings indicate that the degree of double counting is a negligible factor in estimating the total overall mortgage loan activity of institutions subject to the Home Mortgage Disclosure Act. We also present the findings of the degree to which depository institutions did not include, on their disclosure statements, information on individual loans or participations that were sold or purchased.

as "positive" responses and the remaining responses were labeled as "negative." The number and percentage of institutions with positive and negative responses to the survey are shown in Table 2. A total of 39 of the 302 banks that responded to the survey (i.e., 13 percent) indicated a positive response; whereas 14 of the 43 responding savings and loan associations (i.e., 33 percent) indicated a positive response.

None of the 16 responding banks or savings and loan associations in Buffalo indicated a positive response. In San Diego, only 1 of the 14 responding savings and loan associations and none of the 19 responding banks indicated a positive response. The highest percentage of positive responses was obtained in Chicago where 13 of the 28 responding savings and loan associations (i.e., 46 percent) and 39 of the 268 responding banks (i.e., 15 percent) indicated a positive response. These data alone indicate that double counting is not likely to be a factor in either Buffalo or San Diego, but it could be a factor in Chicago — depending on the dollar volume of sales and purchases. Thus, the sale and purchase of mortgage loans among depository institutions in the Chicago SMSA is analyzed in detail in the next section.

2.1.2 Volume of Sales and Purchases by Banks in Chicago

The amounts of the sales and the purchases of individual loans and participations indicated by the 39 Chicago banks indicating positive survey responses are summarized in Tables 3 and 4. Table 3 shows the amounts indicated by banks that originated and sold individual loans, or interests in participations; whereas, Table 4 shows the amounts indicated by banks that purchased individual loans or interests in participations. The individual responses from the 39 banks are included in Appendix C.

Validation of Transactions: The survey responses were validated by comparing the transactions indicated by the selling institution with those indicated by the purchasing institution. The responses are tabulated in Tables 3 and 4 in accordance with the following three outcomes of this validation:

TABLE 2: TYPE OF RESPONSE (i.e., Positive Or Negative)

SMSA		BANKS				SAVINGS AND LOANS				
	Total Responses	Positive*		Negative		Total Responses	Positive*		Negative	
		No.	%	No.	%		No.	%	No.	%
Buffalo	15	0	0	15	100	1	0	0	1	100
Chicago	268	39	15	230	86	28	13	46	15	54
San Diego	19	0	0	19	100	14	1	7	13	93
TOTAL	302	39	13	264	87	43	14	37	27	63

* A positive response indicates either sales or purchases meeting the survey criteria

CHAPTER 2

ANALYSIS AND FINDINGS

In this chapter, we present; 1) a summary of the information obtained from the survey respondents, 2) an analysis of the survey information, 3) estimates of the probable incidence of double counting, and 4) a discussion of problems associated with reporting purchases on disclosure statements.

2.1 SURVEY RESULTS

An overall response rate of 72.5 percent (i.e., 345/476) was achieved in the survey. The number and percentage of institutions that responded to the survey are summarized in Table 1. A total of 43 of the 63 savings and loan associations (i.e., 68 percent) and a total of 302 of the 413 banks (i.e., 73 percent) responded to the survey. As shown in the table, at least a two-third response rate was achieved in each of the three SMSAs in the study.

2.1.1 Type of Response

Only 53 of the 345 respondents (i.e., 15 percent) reported sales or purchases of either individual loans or participations that met the criteria specified in the questionnaire (hereafter called double counting criteria):

- The loan was for residential property located in the same SMSA as the responding institution
- The loan was both originated and sold in "fiscal year 1977"
- The sale or purchase was with another savings and loan or bank also located in the same SMSA as the responding institution and where both institutions were required to prepare a disclosure statement for loans within the SMSA.

For purposes of discussion and analysis, the responses of institutions reporting either sales or purchases meeting the above criteria were labeled

TABLE 1: SURVEY RESPONSE RATE

SMSA	BANKS			SAVINGS AND LOANS		
	Number Mailed	Number Returned	Percentage Returned	Number Mailed	Number Returned	Percentage Returned
Buffalo	19	15	79	1	1	100
Chicago	366	268	73	45	28	62
San Diego	28	19	68	17	14	82
TOTAL	413	302	73	63	43	68

as "positive" responses and the remaining responses were labeled as "negative The number and percentage of institutions with positive and negative responses to the survey are shown in Table 2. A total of 39 of the 302 banks that responded to the survey (i.e., 13 percent) indicated a positive response; whereas 14 of the 43 responding savings and loan associations (i.e., 33 percent) indicated a positive response.

None of the 16 responding banks or savings and loan associations in Buffalo indicated a positive response In San Diego only of the 14 responding savings and loan associations and none of the 19 responding banks indicated a positive response. The highest percentage of positive responses was obtained in Chicago where 13 of the 28 responding savings and loan associations (i.e., 46 percent) and 39 of the 268 responding banks (i.e 15 percent) indicated a positive response These data alone indicate that double counting is not likely to be a factor in either Buffalo or San Diego, but it could be a factor in Chicago depending on the dollar volume of sales and purchases. Thus, the sale and purchase of mortgage loans among depository institutions in the Chicago SMSA is analyzed in detail in the next section.

2.1.2 Volume of Sales and Purchases by Banks in Chicago

The amounts of the sales and the purchases of individual loans and participations indicated by the 39 Chicago banks indicating positive survey responses are summarized in Tables 3 and 4. Table 3 shows the amounts indicated by banks that originated and sold individual loans, or interests in participations; whereas Table 4 shows the amounts indicated by banks that purchased individual loans or interests in participations. The individual responses from the 39 banks are included in Appendix C.

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	Total Res-ponses	Positive*		Negative		Total Res-ponses	Positive*		Negative	
		No.	%	No.	%		No.	%	No.	%
Buffalo	15	0	0	15	100	1	0	0	1	100
Chicago	268	39	15	230	86	28	13	46	15	54
San Diego	19	0	0	19	100	14	1	7	13	93
TOTAL	302	39	13	264	87	43	14	37	27	63

* A positive response indicates either sales or purchases meeting the survey criteria

- **Confirmed Pair (CP)** - The validity of a double counting transaction (CP-D) is "confirmed" if both institutions involved in the transaction submitted a survey response that identified .e. confirmed) the identical sale or purchase. The validity of a transaction involving no double counting (CP-N) is confirmed when either the seller or the purchaser does not report the loan.
- **Possible Pair (PP)** - The validity of a transaciton is defined to be "possible" when only one of two (or more) institutions involved in the transaction indicated a response to the survey.
- **Conflicting or Non-Pair (NP)** - The validity of a transaction if defined to be "conflicting" when one institution indicated a sale or purchase with another institution, where the other responding institution indicated no similar transaction.

As shown in Tables 3 and 4, the validation of responses from the respondent selling and purchasing banks yielded only $100,000 in "confirmed" transactions involving double counting Most transactions were classified as either "possible" or "conflicting" as shown in the tables. The individual transactions for banks are shown in Tables A2-A5 in Appendix C.

Reporting Transactions on Disclosure Statements: In order for a transaction to be double counted, it must be reported in the same year in the disclosure statements of both of the institutions involved in the transaction. The respondents were asked to indicate whether or not each transaction was reported in their disclosure statement and the responses were tabulated in accordance with the following cateogries:

- **Reporting (Y)** - The institution indicated that the transaction was reported in its disclosure statement.
- **Unknown (I)** - The institution failed to indicate whether or not the transaction was reported in its disclosure statement.
- **Not Reported (N)** - The institution indicated that the transaction was not reported in its disclosure statement.

TABLE 3: MAXIMUM POTENTIAL AMOUNT OF DOUBLE COUNTING BY RESPONDENT BANKS ORIGINATING AND SELLING LOANS IN CHICAGO

PARTICIPATIONS ORIGINATED AND SOLD (15 Banks)			
Validation of Transactions	Amount($) of Originations Reported on Disclosure Statement		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	100,000*	0	3,235,349**
B. Possible Pair (PP)	3,284,260	2,158,184	0
C. Conflicting Pair (NP)	866,779	0	0
TOTAL	4,251,039	2,158,184	3,235,349**

INDIVIDUAL LOANS ORIGINATED AND SOLD (9 Banks)			
Validation of Transactions	Amount($) of Originations Reported on Disclosure Statement		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	0	0	472,257**
B. Possible Pair (PP)	460,008	0	0
C. Conflicting Pair (NP)	1,083,154	0	0
TOTAL	1,543,162	0	472,257**

* Confirmed Double-Counting (CP-D)

** Confirmed No Double-Counting (CP-N)

TABLE 4: MAXIMUM POTENTIAL AMOUNT OF DOUBLE COUNTING BY RESPONDENT BANKS PURCHASING LOANS IN CHICAGO

PARTICIPATIONS PURCHASED (17 Banks)			
Validation of Transactions	Amount($) of Purchases Reported on Disclosure Statement		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	100,000*	0	2,861,605**
B. Possible Pair (PP)	1,075,180	0	0
C. Conflicting Pair (NP)	1,537,954	2,776	0
TOTAL	2,713,134	2,776	2,861,605**

INDIVIDUAL LOANS PURCHASED (9 Banks)			
Validation of Transactions	Amount ($) of Purchases Reported on Disclosure Statement		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	0	0	2,495,649**
B. Possible Pair (PP)	3,392,239	0	0
C. Conflicting Pair (NP)	27,000	0	0
TOTAL	3,419,239	0	2,495,649**

* Confirmed Double-Counting (CP-D)

** Confirmed No Double-Counting (CP-N)

The extent to which the respondent banks reported loan originations or purchases on their disclosure statements is tabulated in Tables 3 and 4. Table 3 shows the extent to which originations were reported, and Table 4 shows the extent to which purchases were reported.

According to Section 203.4(a)(3) of Regulation C, depository institutions are required to report originated loans even if these loans were sold during the same fiscal year. Similarly, depository institutions are required to report purchased loans in accordance with the "unpaid principal balances of loans purchased by the depository institution, to the extent of its interest in such purchased loans. Therefore, the amounts that are shown in the "not reported" category of Tables and 4 indicate the extent to which depository institutions understated originations or purchases in their Federal or state disclosure reports.

A summary of the degree to which the respondent banks failed to report originations or purchases on their disclosure reports is presented in Table 5. Two observations can be made from these data:

- Approximately 12 percent of the 268 respondent banks in Chicago engaged in the sale or purchase of interests in participations, with other depository institutions located in Chicago, while approximately 6 percent of the respondent banks engaged in the sale or purchases of individual loans with other depository institutions in Chicago.
- Approximately 43 percent of the dollar volume of sales and purchases of mortgage loans and participations were not properly reported on disclosure statements.

The limitations of the survey should be borne in mind in considering the significance of these two observations. The responses to the survey were limited to transactions among depository institutions located in Chicago

TABLE 5: ESTIMATE OF PROPER AND IMPROPER DISCLOSURE REPORTING BY BANKS

TYPE OF TRANSACTION	Number of Banks			Amount ($ million)		
	With "Positive" Survey Responses	With Improper Disclosure	Percentage Improper Disclosure	Proper Disclosure	Improper Disclosure	Percentage Improper Disclosure
Participations Sold	15	3	20	4.3	3.2	43
Participations Purchased	17	6	35	2.7	2.9	52
Individual Loans Sold	9	3	33	1.5	0.5	25
Individual Loans Purchased	9	1	11	3.4	2.4	41

and subject to the Federal or State disclosure reporting. These responses do not include sales or purchases with institutions or organizations outside of Chicago (subject to the Act or not) or to institutions that are not subject to Federal or State disclosure reporting irrespective of their location. Consequently, the full extent to which originations or purchases were not reported could be considerably greater than shown here. The degree to which originations or purchases are not reported serves to off-set the affect of double counting. The combined mortgage activity (i.e., sales plus purchases) is understated when loans are not reported; whereas, the combined mortgage activity is overstated when double counting occurs.

Double Counting: An outer limit for double counting was determined by assuming that the transactions in the "possible" and "conflicting" categories would eventually be "confirmed" to be double counted. These outer limits are derived from Tables 3 and 4 by combining the amounts that were reported with the amounts where reporting was not identified. The outer limits for double counting by responding banks in Chicago are as follows:

Type of Transaction	Outer Limit of Double-Counting
Participations Sold	$ 6,409,223
Participations Purchased	2,715,910
Individual Loans Sold	1,543,162
Individual Loans Purchased	3,419,239
TOTAL	$ 14,087,534

2.1.3 Volume of Sales and Purchases by Savings and Loan Associations in Chicago

A summary of the amounts of the sales and the purchases of individual loans and participations indicated by the 13 Chicago savings and loan associations that indicated positive survey responses is presented in Tables 6 and 7.

TABLE 6: MAXIMUM POTENTIAL AMOUNT OF DOUBLE COUNTING BY RESPONDENT SAVINGS AND LOAN ASSOCIATIONS ORIGINATING AND SELLING LOANS IN CHICAGO

PARTICIPATIONS ORIGINATED AND SOLD (7 S&L's)

Validation of Transactions	Amount($)of Originations Reported on Disclosure Statement		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	3,501,799*	0	0
B. Possible Pair (PP)	11,556,886	0	0
C. Conflicting Pair (NP)	2,580,000	0	0
TOTAL	17,638,665	0	0

INDIVIDUAL LOANS ORIGINATED AND SOLD (1 S&L)

Validation of Transactions	Amount($)of Originations Reported on Disclosure Statement		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	0	0	0
B. Possible Pair (PP)	269,641	0	0
C. Conflicting Pair (NP)	0	0	0
TOTAL	269,641	0	0

* Confirmed Double Counting

TABLE 7: MAXIMUM POTENTIAL AMOUNT OF DOUBLE COUNTING BY RESPONDENT SAVINGS AND LOAN ASSOCIATIONS PURCHASING LOANS IN CHICAGO

PARTICIPATIONS PURCHASED (9 S&L's)			
Validation of Transactions	Amount ($) of Originations Reported on HMDA		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	3,501,779*	0	16,490,944**
B. Possible Pair (PP)	12,110,933	0	0
C. Conflicting Pair (NP)	19,720	0	0
TOTAL	15,632,432	0	16,490,944**

INDIVIDUAL LOANS PURCHASED (1 S&L)			
Validation of Transactions	Amount ($) of Originations Reported on HMDA		
	Reported (Y)	Unknown (I)	Not Reported (N)
A. Confirmed Pair (CP)	0	0	259,700**
B. Possible Pair (PP)	0	0	0
C. Conflicting Pair (NP)	0	0	0
TOTAL	0	0	259,700**

* Confirmed Double-Counting

** Confirmed No Double-Counting

Table 6 shows the amounts indicated by associations that originated and sold individual loans or interests in participations; whereas, Table 7 shows the amounts indicated by associations that purchased individual loans or interests in participations The individual responses from tha 13 associations are included in Appendix C.

Reporting Transactions on Disclosure Reports: The sales and purchase transactions are tabulated in Tables 6 and 7 in accordance with the three categories of disclosure reporting discussed earlier; namely "reported, "unknown," and "not reported. As shown in Table 6, all of the loans that were both originated and sold in 1977 were reported as originations on the disclosure statements. However, as shown in Table the savings and loan associations did not properly disclose purchases of more than $16 million of interests in participations; whereas, they did properly disclose purchases of nearly an equal amount (i.e., $15.6 million). The $16 million in unreported purchases is dominated by two large transactions totaling $12 million between two savings and loan associations in Chicago. These two transactions involved the sale and purchase of interests in 428 loans in two participations. The purchasing association listed the purchase in the out-of-state section of its Federal disclosure statement even though their questionnaire response indicated that the loans involved residential property located within the Chicago SMSA. The FHLBB was not able to ascertain the reasons why this S&L did not itemize the loans by census tracts in the Chicago SMSA following several months of inquiry.

A summary of the degree to which the respondent savings and loan associations failed to report originations or purchases on their disclosure statements is presented in Table 8. Two observations can be made from these data:

- The responses indicate that 16 of the 28 respondent savings and loan associations (i.e 57 percent) in Chicago engaged in the sale or purchase of interests in participations with other depository institutions located in Chicago, while only one pair of depository institutions (e.g., 7 percent) engaged in the sale and purchase of individual loans with other depository institutions located in Chicago.

TABLE 8: ESTIMATE OF PROPER AND IMPROPER DISCLOSURE REPORTING BY S & L's

TYPE OF TRANSACTION	Number of S&Ls			Amount ($ million)		
	With "Positive" Survey Responses	With Improper Disclosure	Percentage Improper Disclosure	Proper Disclosure	Improper Disclosure	Percentage Improper Disclosure
Participations Sold	7	0	0	17,638,665	0	0
Participations Purchased	9	2	22	15,632,432	16,490,944	51
Individual Loans Sold	1	0	0	269,641	0	0
Individual Loans Purchased	1	0	0	259,700*	0	0

* Not reported by the bank that orginated and sold the loan

- A significant fraction (i.e., 51 percent) of the purchases of interests in participations were not properly reported on disclosure reports. Further, the amount of these unreported purchases (i.e., $16.4 million) is nearly one-half of the combined amount of all the reported originations and purchases (i.e., $33.8 million).

Since the reported transactions are only those among depository institutions located in Chicago and subject to the Federal or State disclosure reporting, they represent only a small fraction of the total volume of sales and purchases made by the depository institutions. Consequently, the full extent to which originations or purchases were not reported could be considerably greater than shown here.

Double-counting: Using the same approach that was used with banks, an outer limit for double-counting by the responding savings and loan associations was determined. This outer limit assumes that the transactions in the "possible" or "conflicting" categories would eventually be "confirmed," and that the transactions clasified in the "unknown" reporting category were actually reported. Given these assumptions the outer limits are as follows:

Type of Transaction	Outer Limit of Double-Counting
Participations Sold	$ 17,638,665
Participations Purchased	$ 12,130,653*
Individual Loans Sold	$ 269,641
Individual Loans Purchased	$ 0
TOTAL	$ 30,038,959

*Reduced by $3,501,779 already counted under participations sold.

2.2 ESTIMATION OF DOUBLE COUNTING

Our procedures for estimating the extent to which the "worst case" that double counting could occur involves the following steps:

1. Estimate the amount of the outer limit of loans that were double counted by the banks and by the savings and loan associations that responded to the survey in a given SMSA.

2. Determine the number of banks and the number of savings and loan associations that are located in a given SMSA and that potentially could have sold or purchased loans meeting the double counting criteria.

3. Determine the number of banks and the number of savings and loan associations that responded to the survey in a given SMSA.

4. Determine the response rate of the survey for banks and for savings and loan associations by dividing the number of respondents (determined by 3) above) by the total number of institutions (determined by 2) above).

5. Assume that double counting would have been reported by the non-respondent banks and savings and loans to the same degree that it was reported by the respondents and estimate the "worst case" amount of double counting for the entire SMSA by multipling the outer limit estimates determined of 1) above) by the inverse of the response rate (determined by 4) above)

6. Sum the "worst case" amount of double counting and loans for the entire SMSA.

7. Determine the total amount of loans originated in fiscal year 1977 by the institutions subject to the Home Mortgage Disclosure Act or the comparable state disclosure reporting.

8. Calculate the "worst case" percentage of double counting by dividing the "worst case" amount of double counting for the entire SMSA (determined by 6) above) by the total amount of loans originated in fiscal year 1977 (determined by 7) above).

This "worst case" analysis has several limitations. First, there is no absolute assurance that the non-respondent institutions will behave as the respondents. However, the purchases that were reported in the disclosure statements prepared by these institutions provide strong evidence that the total amount of purchases of loans for properties within the SMSA from all sources is relatively low. The disclosure statements processed by the Phase 1 contractor for institutions in these SMSAs indicated the following purchase amount for loans served by both single family and multi-family dwellings:

SMSA	Amount of Reported Purchases ($ millions)
Buffalo	0
Chicago	51.7
San Diego	40.8

It must be kept in mind that the above information for Chicago was based, in part, upon the state disclosure statements prepared by the state-chartered institutions. The "disbursements" part of this statement combines both originations and purchases. These loans were considered to be originations, so any purchases made by state-chartered institutions would not be identified. Even so, the $51.7 million reported by Federally-chartered institutions substantiates the validity that the non-respondents to our survey did not behave in a significantly different manner than did the respondents to the survey. Moreover, the absence of any reported purchases in Buffalo and only $40.8 million in San Diego further suggests that double counting is not an issue in Buffalo and would only be a minor issue in San Diego in the unlikely event that all of these purchases were double counted.

2.2.1 Estimated "Worst Case" of Double Counting for the Chicago SMSA

The estimated "worst case" amount and percentage of double counting for the Chicago SMSA is determined by the steps previously outlined.

1. Amount of the outer limit of double counting

Banks:	$14,087,534
S&L's:	$30,038,959
	$44,126,493

2. Number of depository institutions in Chicago SMSA

Banks:	366
S&L's:	135

The savings and loan associations include the 45 associations to whom questionnaires were sent (i.e., those purchasing or selling individual loans) plus 90 associations that, according to Section G of the Semiannual Financial Reports, sold or purchased participations but not individual loans.

3. Number of respondents to the survey in the Chicago SMSA

Banks: 268
S&L's: 28

4. Response rate to survey

Banks: 268/366 = 73 percent
S&L's: 28/135 = 21 percent

5&6. Estimate and sum of "worst case" of double counting

Banks: ($14.0 million) (366/268) = $19.1 million
S&L's: ($30.0 million) (135/28) = $144.6 million
TOTAL $163.7 million

7. Total Loans Originated by Institutions in Chicago SMSA

From Phase 1 contractor, total loans secured by single family and multi-family properties that were originated in fiscal year 1977	$5.4 billion

8. Calculate "worst case" percentage of Double Counting

"Worst case" percentage = 163.7/5,400 = 3.0 percent

Conclusion: We cannot be certain that this is the "worst case" percentage, because one or more state-chartered non-respondents to our survey could have purchased a large volume of loans that meet the double counting criteria. However, we believe that this is unlikely and conclude that double counting should not be considered a major source of error in summing originations and purchases to estimate the total fiscal year 1977 mortgage activity for the Chicago SMSA.

We base this conclusion on several factors including:

1. The "worst case" estimate of $163.7 million and 3.0 percent assumes that all of the unvalidated survey responses would be confirmed as double counting; whereas, previous follow-up activities indicate that this is extremely unlikely.

2. The magnitude of aggregation errors or discrepancies that occur in the preparation of the disclosure statement is probably greater than 3.0 percent*

3. Only $51.7 million of purchased loans were reported in the disclosure statements of the Federally-chartered depository institutions in the Chicago SMSA, and only a portion of these could be double counted.

4. All evidence suggests that most of the transactions involving the sale or purchase of mortgage loans are between either depository institutions in two separate SMSAs or between a depository institution and another organization not subject to the Act.

5. The available evidence indicates that some institutions are not reporting loans originated and sold while others are not reporting purchases; and these omissions tend to understate the lending activity.

2.2.2 Estimated "Worst Case" of Double Counting for San Diego SMSA

The estimated "worst case" amount and percentage of double counting for the San Diego SMSA is determined by the steps previously outlined.

1. Amount of the outer limit of double counting

   Banks: $ 0
   S&L's: $ 3.5 million

2. Number of depository institutions in San Diego SMSA

   Banks: 28
   S&L's: 25

3. Number of respondents to the survey in San Diego SMSA

   Banks: 19
   S&L's: 14

---

*See the companion study report on accuracy[2]

4. Response rate to survey

Banks: 19/28 = 28 percent
S&L's: 14/25 = 68 percent

5&6. Estimate and sum of "worst case" of double counting

Banks: ($ 0) (20/19) = 0
S&L's: ($3.5 million) (25/19) = $4.6 million

7. Total loans originated by institutions in San Diego SMSA

From Phase 1 contractor, total loans secured by single family and multi-family properties that were originated in fiscal year 1977	$2.6 billion

8. Calculate "worst case" percentage of double counting

"Worst case" percentage = 4.6/2,600 = 0.18 percent

2.2.3 Estimated "Worst Case" of Double Counting for Buffalo SMSA

The estimated "worst case" amount and percentage of double counting for the San Diego SMSA is determined by the steps previously outlined.

1. Amount of the outer limit of double counting

Banks: $ 0
S&L's: $ 0

2. Number of depository institutions in the Buffalo SMSA

Banks: 19
S&L's: 3

3. Number of respondents to the survey in Buffalo SMSA

Banks: 15
S&L's: 1

4. Response rate to survey

Banks: 15/19 = 79 percent
S&L's: 1/3 = 33 percent

5&6. Estimate and sum of "worst case" of double counting

Banks: ($0) (15/19) = $ 0
S&L's: ($0) (1/3) = $ 0

7. Total loans originated by institutions in Buffalo SMSA

From Phase 1 contractor, total loans secured by single family and multi-family properties that were originated in fiscal year 1977 — $416 million

8. Calculate "worst case" percentage of double counting

"Worst case" percentage = 0/416 = 0 percent

2.2.4 Conclusion on Further Validation

The results of the "worst case" analysis of double counting together with the volume of purchases included in the disclosure statements of the depository institutions indicate that double counting is not a major source of error in aggregating the originations and purchases in any of the three SMSAs. Consequently, it was concluded that the expense involved in further validation of the survey responses was not warranted.

2.3 PROBLEMS IN REPORTING

Improper reporting of loans sold or purchased among depository institutions is not a significant source of error in home mortgage disclosure data. The extent to which the Chicago survey respondants did not include originations (for loans sold) or purchased loans on their disclosure statements is shown in Tables and 8. Only two savings and loan associations did not include participations they purchased. Six banks did not include originations they sold, and seven banks did not include loans they purchased. The dollar volume of improper reporting by banks (i.e., $9 million) and by savings and loan associations (i.e. $16.5 million) is small compared to the dollar volume of 1977 mortgage loan originations in the Chicago SMSA (i.e., $5,400 million).

There are, however, two causes for concern. First, approximately 33 percent of the dollar volume of these loans were improperly reported by savings and loan associations and 43 percent were improperly reported by banks Second, the reported transactions are only those between two depository institutions in Chicago subject to disclosure reporting and these transactions are only a fraction of all such sale and purchase transactions involving depository institutions.

The Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation attempted to obtain follow-up information on the problems associated with reporting loans sold or purchased, but little information was obtained.

During the accuracy audits, the study team investigated problems associated with reporting loans purchased or sold Most institutions that were involved in the accuracy analysis however did not purchase or sell loans in 1977 for properties in the three SMSAs of the study. Consequently, the accuracy findings on this problem were also inconclusive.

The study team found that some institutions have the mistaken understanding that Regulation C indicates they have an option not to include a loan origination in the disclosure statement, if the loan was sold during the fiscal year in which it was originated. This mistake derives from misreading Section 203.4, Paragraph (a)(ii)(B) of Regulation C which states the depository institution may "...omit, at its option, any mortgage loan that was (1) both originated and sold or paid in full during such fiscal year .." However, as stated in Paragraph (a)(4)(ii this option is only applicable to "...a full fiscal year ending prior to July 1, 1976..."

The study team also investigated the possibility that institutions which purchase interests in participations [illegible] percentage of individual loans and which therefore, do not obtain the rights to service the loans would have difficulty in geocoding and classifying the loans, if they do not receive a complete set of information on the census tracts, types of loan, type of dwellings etc. from the seller The response from institutions on this issue was mixed and inconclusive. Some institutions indicated that information needed for disclosure of purchased loans was provided by the seller even in instances where the seller retained the rights to service the loans. In addition, some institutions indicated that their standard practice was to appraise the residential property securing loans they were considering purchasing Still other institutions indicated that they would anticipate difficulties in obtaining information needed for reporting purchased loans on disclosure statements if they were to purchase loans from other institutions. Additional research beyond the study, is needed to obtain a more definitive assessment of these problems.

REFERENCES

1. Federal Home Loan Bank Board, "Semiannual Reports — General Instructions," Section G — Supplemental Data, March 1976.

2. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Accuracy of Disclosure Statement Preparation," November 1979.

APPENDIX A

GUIDELINES FOR DISCLOSURE
IN THE STATE OF ILLINOIS

STATE OF ILLINOIS
DEPARTMENT OF FINANCIAL INSTITUTIONS
160 N. LA SALLE
CHICAGO
60601

A. T. TSOUMAS
DIRECTOR

TO ALL FINANCIAL INSTITUTIONS REPORTING UNDER PUBLIC ACT 79-632
FINANCIAL INSTITUTIONS DISCLOSURE ACT

As we approach the deadline for the six month report for the Financial Institutions Disclosure Act we want to clear up several items that caused concern during the first reporting period.

WHO MUST REPORT

Every bank savings and loan, insurance company and mortgage banker doing business in Illinois must report. If you do not make the kinds of loan that are reportable or if you do not make loans in any of the seventeen counties listed below, having populations of over 100,000 you must tell us that by properly filling out the affidavit indicating "2) there were no reportable transactions under Section Financial Institutions Reporting Act." The affidavit must be signed by two officers and verified (notarized). The affidavit will then constitute your report. It is your responsibility to inform us if you are not making loans in the counties listed. Failure to report can result in fines of $100 per day with a minimum of $500.00.

REPORTS MUST BE MADE BOTH BY ZIP CODE AND CENSUS TRACTS.

All loans are to be reported by census tract and zip code. If census tracts are not assigned to an area included in the seventeen counties--and only in such cases--the property is to be designated by zip code only. Census tract boundaries are those established and published by the Bureau of the Census.

The Department recognizes as official the Bureau of the Census report of 1970 listing the following counties in Illinois as having over 100,000 in population:

Champaign Cook DuPage Kane Lake LaSalle Macon
Madison McHenry McLean Peoria Rock Island St.Clair Sangamo
Tazewell Will Winnebago

THESE ARE THE ONLY COUNTIES FOR WHICH YOU NEED TO REPORT YOUR LOANS.

Public Act 79-632 plainly states that you must file by both zip code and census tract. Do not use the same page for both reports. We are sending you two forms A and B as samples. You may copy them or use them as the basis for a computerized report. When the reports are properly completed, 6 reports will be sent to this Department. Form A requires reporting of 1. applications by zip code, 2. applications by census tract, 3. disbursements by zip code, 4. disbursements by census tract. Form B requires the reporting of; 1. an update of your aggregate by zip code, 2. an update of the aggregate by census tract. Please designate each page by circling the appropriate title in the upper left hand corner. The report must be accompanied by your properly verified (notarized) affidavit attesting to the accuracy and truthfulness of the reports.

AGGREGATE REPORTING

PA 79-632 requires a report on your aggregate outstanding portfolio. This means the tota er of loans on your books and the dollar amount for each zip code and census tract. It does not matter how long ago the loan was made as long as there is still an outstanding balance

APPLICATION DISBURSEMENT REPORTING

Each institution is required to report both applications for loans and disbursements of funds. "Application" in this context is defined as, "A written request for a loan on a standa form supplied and/or used by the reporting institution."

RESIDENTIAL LOANS

Residential loans includes loans of 1 to 4 units.

CONSTRUCTION LOANS

For purposes of this report, a construction loan is defined as a short-term loan to finan real estate improvements with or without a take out commitment for permanent financing on residential buildings of 5 units and over.

HOME IMPROVEMENT LOANS AND REHABILITATION LOANS.

The report requires a breakdown of conventional and FHA-insured home improvement and rehab loans. The form contemplates reporting on only 1 to 4 family units under the section on Home Improvement and Rehabilitation Loans. It should be noted that only home improvement relating t residential property need be reported.

RESIDENTIAL LOANS.

The form requires the reporting of end loan financing as opposed to construction lending on residential property of 5 units and over.

FISCAL YEAR ENDINGS.

We have been informed that the fiscal years of all insurance companies, banks and mortgag bankers end on 12/31 We have a listing of the fiscal year endings for the savings and loan institutions from the Federal Home Loan Bank. If you are an insurance company, bank or mortgage banker with a fiscal year ending other than 12/31 or if you are a savings and loan institution whose fiscal year ending has changed from the information given out by the Federal Home Loan Bank, please contact this office telling us when your fiscal year does end so that we can note the due date of your reports under the Act.

PLEASE SEND THESE REPORTS DIRECTLY TO THE DEPARTMENT OF FINANCIAL INSTITUTIONS.
DO NOT INCLUDE IN MAILINGS TO OTHER REGULATORY AGENCIES.

Any further questions, please direct them to:

Ms. Vera Berrino, Area Code 312-793-2006

For [illegible] DEPARTMENT OF FINANCIAL INSTITUTIONS, STATE OF ILLINOIS, 160 North La Salle Street, [illegible]

FINANCIAL INSTITUTIONS DISCLOSURE ACT REPORT

Circle one:
APPLICATIONS
DISBURSEMENTS

Reporting Institution

Address

All dollar amounts are to be reported to nearest thousand; eliminate 000

DATE

ZIP CODE or CENSUS TRACT NUMBER (Circle One)	RESIDENTIAL LOANS SECURED BY 1 to 4 UNITS						CONSTRUCTION LOANS 5 Units & Over						HOME IMPROVEMENT & REHABILITATION LOANS				RESIDENTIAL LO SECURED BY 5 UN AND OVER	
	Conventional		FHA Insured		VA Guaranteed		Conventional		FHA Insured		VA Guaranteed		Conven-tional		FHA Insured			
	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$

AGGREGATE
OUTSTANDING
PORTFOLIO OF
DISBURSED
FUNDS
AS OF ______
DATE

DEPARTMENT OF FINANCIAL INSTITUTIONS, STATE OF ILLINOIS, 160 North La Salle Street, Chicago 60601

FINANCIAL INSTITUTIONS DISCLOSURE ACT REPORT

Reporting Institution

Address ______

Al dollar amounts are to be reported to nearest thousand eliminate 000

DATE

ZIP CODE or CENSUS TRACT NUMBER (Circle One)	RESIDENTIAL LOANS SECURED BY 1 to 4 UNITS						CONSTRUCTION LOANS 5 Units & Over						HOME IMPROVEMENT & REHABILITATION LOANS				RESIDENTIAL LOANS SECURED BY 5 UNITS AND OVER	
	Conventional		FHA Insured		VA Guaranteed		Conventional		FHA Insured		VA Guaranteed		Conventional		FHA Insured			
	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$

REPORT TO THE DEPARTMENT OF FINANCIAL INSTITUTIONS, STATE OF ILLINOIS

FOR THE PERIOD ENDING, ______________________________

By Institutions Under the "Financial Institutions Disclosure Act" (PA 79-632)

To be filed within 60 days of the Institution's Fiscal Year and Every 6 Months.

NAME OF COMPANY ______________________________

ADDRESS ______________________________ PHONE ______________

LICENSED BY (If Applicable) ______________________________

LICENSE NO. (If Applicable) ______________________________

Is This A Consolidated Report? ______________________________

Name and Address of Branches, Subsidiaries ______________________________

____

____

____

STATE OF ______________)
) ss
COUNTY OF ______________)

We, ______________________________, ______________________________

being the ______________________________, ______________________________

of the ______________________________, swear (or affirm) that to the best of our knowledge and belief the statements contained in this report,

1) including the accompanying schedules and statements (if any) are true, and the same is a true and complete statement, or

2) there were no reportable transactions under Section 1, Financial Institutions Reporting Act.

____

____

Subscribed and sworn to before me this ______________ day of ______________
A.D. 19__________.

____
NOTARY PUBLIC

APPENDIX B

QUESTIONNAIRES ON LOAN PURCHASES AND SALES FOR THE BUFFALO, SAN DIEGO, CHICAGO SMSAs

QUESTIONNAIRE ON LOAN PURCHASES AND SALES FOR THE BUFFALO SMSA

INSTRUCTIONS

PURPOSE: The Federal Home Loan Bank Board (FHLBB) and Federal Deposit Insurance Corporation (FDIC) are conducting a survey of all savings and loan associations and all commercial and mutual savings banks in the Buffalo Standard Metropolitan Statistical Area (SMSA) to estimate the number and volume of loans that were both originated and sold during the fiscal year* ending December 31, 1977. This information is an important input to a study jointly sponsored by the FHLBB and FDIC in which the 1977 Home Mortgage Disclosure Act (HMDA) reports are being compiled and reporting methods and problems are being investigated to seek ways for improvement. This information is being collected solely for the purposes of this study, and will not be used in connection with compliance activities of the FHLBB or FDIC. Information supplied by individual institutions in this survey will not be released outside the study, but a copy of the aggregate results will be furnished to you if you so elect.

Do you wish a copy of the aggregate results? Yes ☐ No ☐

DEFINITION OF INFORMATION O BE SUPPLIED: Part A of the survey pertains only to individual 1-4 family residential mortgage loans that were originated during the "1977" fiscal year and that you either sold to, or purchased from another savings and loan association or commercial and mutual savings banks located in the Buffalo SMSA. If you did not either sell any mortgages that you originated in your "1977" fiscal year or purchase them from savings and loan associations or commercial banks located in the Buffalo SMSA, please submit a negative report to this section of the questionnaire by checking the "no" boxes in questions 1 and 4.

Part B of the survey pertains to sales or purchases of participations for, or involving 1-4 family residential mortgage loans. (Do not include participations for, or involving home improvement loans or multi-family dwellings or participation certificates issued by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association or the Farmers Home Administration.) If you did not purchase or sell these in fiscal year "1977" please submit a negative report to this section of the questionnaire by checking the "no" boxes in Question 6a and 6b.

FHLBB/FDIC SURVEY

Print or type your institution's name and address:

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* For institutions with fiscal closures other than December 31, 1977, we wish the data for the fiscal year ending date between March 1, 1977, and February 28, 1978.

PART A: INDIVIDUAL MORTGAGE LOANS

Individual Mortgage Loans You Sold

Were any of the residential 1-4 family mortgage loans that you originated in your "1977" fiscal year sold to either savings and loan associations or commercial and mutual savings banks located in the Buffalo SMSA? (If answer is "no," please go to question 4)

Yes ☐

No ☐

If so, did you include these mortgage loans in Part A (Originations) of your "1977" fiscal year HMDA report or, if you filed with the State of New York, were they included in the state report?*

Yes ☐

No ☐

Please list the following information pertaining only to savings and loan associations and commercial and mutual savings banks located in Buffalo SMSA and to whom you sold morgage loans that you originated in your "1977" fiscal year? (If more space is needed, please attach a separate page and make appropriate reference to this question.)

Name of Purchasing Institution	Address	Number of Loans You Sold	Total Amount

Individual Mortgage Loans You Purchased

Did you purchase any 1-4 family residential mortgage loans from either commercial and mutual savings banks or savings and loan associations located in the Buffalo SMSA? (If answer is "no," Please go to question 6.)

Yes ☐

No ☐

Please list the following information pertaining only to savings and loan associations and commercial and mutual savings banks located in the Buffalo SMSA and from whom you purchased loans that were originated in the "1977" fiscal year of the institution that sold them to you. (If more space is needed, attach a separate page and make appropriate reference to this question.)

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* As of July 1, 1976, institutions no longer have the option of omitting from their HMDA reports loans both originated and sold in the same fiscal year. (Regulation C, Section 203.4, (a) (4) (ii) (B)) Nevertheless an important aspect of this study is to ascertain the reporting practices currently followed by institutions subject to HMDA. Information supplied on this questionnaire will NOT be used in connection with compliance activities of FDIC or FHLBB.

Name of Institution Selling Loans to You	Address	Were These Loans Originated by the Selling Institution (Yes or No)	Number of Loans You Purchased*	Total Amount*

* Include all loans and amounts you purchased even if this institution did not originate them.

PART B: PARTICIPATIONS

Participations You Sold

6. Did you either purchase or sell any interests in participations for, or involving mortgage loans for 1-4 family residential property located in the Buffalo SMSA during your "1977" fiscal year? (Do not include participations for, or involving home improvement loans or multi-family dwellings or participation certificates issued by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association or the Farmers Home Administration.)

a. Purchase: Yes ☐ b. Sell: Yes ☐

No ☐ No ☐

(If your answer to 6a and 6b is "no" you have completed the questionnaire)

7. If you sold participations for, or involving mortgage loans for 1-4 family residential property located in the Buffalo SMSA and originated in FY 1977, please supply the following information for EACH participation. (NOTE: This question asks you to specify purchases by each institution involved in the participation.)

SAMPLE: For a sample indicating how to report this data, please see Appendix A.

Participation number	Name of institution you sold to	Address	loans originated in FY 1977 (Yes or No)	loans originated in FY77: Number of loans sold	→ Total Dollars	of total participation comprised by $ value

FORM FOR RESPONSES TO QUESTION 7

8. Were all of the loans listed in question 7 as originated by you in fiscal year "1977" included in Part A (Originations) of your "1977" fiscal year HMDA report, or if you filed with the State of New York, were they included in the state report? (See footnote bottom of page two)

Yes ☐ No ☐

If no, please indicate: Total number not included__________, total amount not included__________.

PARTICIPATIONS PURCHASED

9. If you purchased an interest in a participation for, or involving mortgage loans for 1-4 family residential property located in the Buffalo SMSA, please list the following information. (Do not include participations for, or involving home improvement loans, multi-family dwellings, or those loans not originated in FY 1977.)

Name of institution selling loans to you	Address	Number of loans in which participations were purchased	Total amount purchased	Were these purchases included on your FY "1977" HMDA or State Report (Yes or No)

Participation number	Name of institution you sold to	Address	Were all loans originated in FY 1977 (Yes or No)	For those loans originated in FY77: Number of loans sold	→ Total Dollars	Percentage of total participation comprised by $ value
1	First Savings & Loan	733 Michigan Avenue	Yes	10	150,000	40%
	Fillmont Savings & Loan	200 Fillmont Avenue	Yes	10	150,000	40 %
2	North River Savings Bank	Cortland Place, NY, NY	No	30	[illegible]	60%
	Savings Bank of Buffalo	555 Pearl St.	No	10	[illegible]	20%
	Erie Savings	[illegible] Place	No	5	[illegible]	10%

APPENDIX A: SAMPLE OF RESPONSE TO QUESTION 7

QUESTIONNAIRE ON LOAN PURCHASES AND SALES FOR THE CHICAGO SMSA

INSTRUCTIONS

PURPOSE: The Federal Home Loan Bank Board (FHLBB) and Federal Deposit Insurance Corporation (FDIC) are conducting a survey of all savings and loan associations and all commercial banks in the Chicago Standard Metropolitan Statistical Area (SMSA) to estimate the number and volume of loans that were both originated and sold during the fiscal year* ending December 31, 1977. This information is an important input to a study jointly sponsored by the FHLBB and FDIC in which the 1977 Home Mortgage Disclosure Act (HMDA) reports are being compiled and reporting methods and problems are being investigated to seek ways for improvement. This information is being collected solely for the purposes of this study, and will not be used in connection with compliance activities of the FHLBB or FDIC. Information supplied by individual institutions in this survey will not be released outside the study, but a copy of the aggregate results will be furnished to you if you so elect.

Do you wish a copy of the aggregate results? Yes ☐ No ☐

DEFINITION OF INFORMATION TO BE SUPPLIED: Part A of the survey pertains only to individual 1-4 family residential mortgage loans that were originated during the "1977" fiscal year and that you either sold to, or purchased from another savings and loan association or commercial banks located in the Chicago SMSA. If you did not either sell any mortgages that you originated in your "1977" fiscal year or purchase them from savings and loan associations or commercial banks located in the Chicago SMSA please submit a negative report to this section of the questionnaire by checking the "no" boxes in questions 1 and 4.

Part B of the survey pertains to sales or purchases of participations for, or involving 1-4 family residential mortgage loans (Do not include participations for or involving home improvement loans, or multi-family dwellings or participation certificates issued by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association or the Farmers Home Administration. If you did not purchase or sell these in fiscal year "1977 please submit a negative report to this section of the questionnaire by checking the "no" boxes in Question 6a and 6b.

FHLBB/FDIC SURVEY

Print or type your institution's name and address: ____________________

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* For institutions with fiscal closures other than December 31, 1977, we wish the data for the fiscal year ending date between March 1, 1977, and February 28, 1978.

PART A: INDIVIDUAL MORTGAGE LOANS

Individual Mortgage Loans You Sold

1. Were any of the residential 1-4 family mortgage loans that you originated in your "1977" fiscal year sold to either savings and loan associations or commercial banks located in the Chicago SMSA? (If answer is "no," please go to question 4) Yes ☐ No ☐

2. If so, did you include these mortgage loans in Part A (Originations) of your "1977" fiscal year HMDA report or, if you filed with the State of Illinois, were they included in the state report?* Yes ☐ No ☐

3. Please list the following information pertaining only to savings and loan associations and commercial banks located in the Chicago SMSA and to whom you sold mortgage loans that you originated in your "1977" fiscal year? (If more space is needed, please attach a separate page and make appropriate reference to this question.)

Name of Purchasing Institution	Address	Number of Loans You Sold	Total Amount

Individual Mortgage Loans You Purchased

4. Did you purchase any 1-4 family residential mortgage loans from either commercial banks or savings and loan associations located in the Chicago SMSA? (If answer is "no," please go to question 6.) Yes ☐ No ☐

5. Please list the following information pertaining only to savings and loan associations and commercial banks located in the Chicago SMSA and from whom you purchased loans that were originated in the "1977" fiscal year of the institution that sold them to you. (If more space is needed, attach a separate page and make appropriate reference to this question.)

* As of July 1, 1976, institutions no longer have the option of omitting from their HMDA reports loans both originated and sold in the same fiscal year. (Regulation C, Section 203.4, (a) (4) (ii) (B)) Nevertheless an important aspect of this study is to ascertain the reporting practices currently followed by institutions subject to HMDA. Information supplied on this questionnaire will NOT be used in connection with compliance activities of FDIC or FHLBB.

Name of Institution Selling Loans to You	Address	Were These Loans Originated by the Selling Institution (Yes or No)	Number of Loans You Purchased*	Total Amount*

* Include all loans and amounts you purchased even if this institution did not originate them.

PART B: PARTICIPATIONS

Participations You Sold

6. Did you either purchase or sell any interests in participations for, or involving mortgage loans for 1-4 family residential property located in the Chicago SMSA during your "1977" fiscal year? (Do not include participations for, or involving home improvement loans or multi-family dwellings or participation certificates issued by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association or the Farmers Home Administration.)

a. Purchase: Yes ☐ b. Sell: Yes ☐

No ☐ No ☐

(If your answer to 6a and 6b is "no" you have completed the questionnaire)

7. If you sold participations for, or involving mortgage loans for 1-4 family residential property located in the Chicago SMSA and originated in FY 1977, please supply the following information for EACH participation. (NOTE: This question asks you to specify purchases by each institution involved in the participation.)

SAMPLE: For a sample indicating how to report this data, please see Appendix A.

Participation number	Name of institution you sold to	Address	Were all loans originated in FY 1977 (Yes or No)	For those loans originated in FY77: Number of loans sold	Total Dollars	Percentage of total participation comprised by $ value

FORM FOR RESPONSES TO QUESTION 7

8. Were all of the loans listed in question 7 as originated by you in fiscal year "1977" included in Part A (Originations) of your "1977" fiscal year HMDA report, or if you filed with the State of Illinois, were they included in the state report? (See footnote bottom of page two)

Yes ☐ No ☐

If no, please indicate: Total number not included__________,
total amount not included__________.

PARTICIPATIONS PURCHASED

9. If you purchased an interest in a participation for, or involving mortgage loans for 1-4 family residential property located in the Chicago SMSA, please list the following information. (Do not include participations for, or involving home improvement loans, multi-family dwellings, or those loans not originated in FY 1977.)

Name of institution selling loans to you	Address	Number of loans in which participations were purchased	Total amount purchased	Were these purchases included on your FY "1977" HMDA or State Report (Yes or No)

Participation number	Name of institution you sold to	Address	Were all loans originated in FY 1977 (Yes or No)	For those loans originated in FY77: Number of loans sold	→ Total Dollars	Percentage of total participation comprised by $ value
1	FIRST SAVINGS + LOAN	725 MICHIGAN AVENUE	YES	10	150,000	40%
	FILMONT SAVINGS + LOAN	200 FILMONT AVENUE	YES	10	150,000	40%
2	NORTH BUSH SAVINGS BANK	CORTFORD PLAZA, NY, NY	NO	30	1,500,000	60%
	SAVINGS BANK OF BUFFALO	545 PLAIN ST.	NO	10	500,000	20%
	ERIC SAVINGS	ARCHER PLACE	NO	5	250,000	10%

APPENDIX A: SAMPLE OF RESPONSE TO QUESTION 7

QUESTIONNAIRE ON LOAN PURCHASES AND SALES FOR THE SAN DIEGO SMSA

INSTRUCTIONS

PURPOSE: The Federal Home Loan Bank Board (FHLBB) and Federal Deposit Insurance Corporation (FDIC) are conducting a survey of all savings and loan associations and all commercial banks in the San Diego Standard Metropolitan Statistical Area (SMSA) to estimate the number and volume of loans that were both originated and sold during the fiscal year* ending December 31, 1977. This information is an important input to a study jointly sponsored by the FHLBB and FDIC in which the 1977 Home Mortgage Disclosure Act (HMDA) reports are being compiled and reporting methods and problems are being investigated to seek ways for improvement. This information is being collected solely for the purposes of this study, and will not be used in connection with compliance activities of the FHLBB or FDIC. Information supplied by individual institutions in this survey will not be released outside the study, but a copy of the aggregate results will be furnished to you if you so elect.

Do you wish a copy of the aggregate results? Yes ☐ No ☐

[illegible]: Part A of the survey pertains only to individual 1-4 family residential mortgage loans that were originated during the "1977" fiscal year and that you either sold to, or purchased from another savings and loan association or commercial banks located in the San Diego SMSA. If you did not either sell any mortgages that you originated in your "1977" fiscal year or purchase them from savings and loan associations or commercial banks located in the San Diego SMSA, please submit a negative report to this section of the questionnaire by checking the "no" boxes in questions 1 and 4.

Part B of the survey pertains to sales or purchases of participations for, or involving 1-4 family residential mortgage loans. (Do not include participations for, or involving home improvement loans, or multi-family dwellings or participation certificates issued by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association or the Farmers Home Administration.) If you did not purchase or sell these in fiscal year "1977," please submit a negative report to this section of the questionnaire by checking the "no" boxes in Question 6a and 6b.

FHLBB/FDIC SURVEY

Print or type your institution's name and address: ______________________________

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institutions with fiscal closures other than December 31, 1977, we wish data for the fiscal year ending date between March 1, 1977, and February 28, 1978.

PART A: INDIVIDUAL MORTGAGE LOANS

Individual Mortgage Loans You Sold

1. Were any of the residential 1-4 family mortgage loans that you originated in your "1977" fiscal year sold to either savings and loan associations or commercial banks located in the San Diego SMSA? (If answer is "no," please go to question 4) Yes ☐ No ☐

2. If so, did you include these mortgage loans in Part A (Originations) of your "1977" fiscal year HMDA report or, if you filed with the State of California, were they included in the state report?* Yes ☐ No ☐

3. Please list the following information pertaining only to savings and loan associations and commercial banks located in the San Diego SMSA and to whom you sold mortgage loans that you originated in your "1977" fiscal year? (If more space is needed, please attach a separate page and make appropriate reference to this question.)

Name of Purchasing Institution	Address	Number of Loans You Sold	Total Amount

Individual Mortgage Loans You Purchased

4. Did you purchase any 1-4 family residential mortgage loans from either commercial banks or savings and loan associations located in the San Diego SMSA? (If answer is "no," please go to question 6.) Yes ☐ No ☐

5. Please list the following information pertaining only to savings and loan associations and commercial banks located in the San Diego SMSA and from whom you purchased loans that were originated in the "1977" fiscal year of the institution that sold them to you. (If more space is needed, attach a separate page and make appropriate reference to this question.)

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* As of July, 1976, institutions no longer have the option of omitting from their HMDA reports loans both originated and sold in the same fiscal year. (Regulation C, Section 203.4, (a) (4) (ii) (B)) Nevertheless an important aspect of this study is to ascertain the reporting practices currently followed by institutions subject to HMDA. Information supplied on this questionnaire will NOT be used in connection with compliance activities of FDIC or FHLBB.

Name of Institution Selling Loans to You	Address	Were These Loans Originated by the Selling Institution (Yes or No)	Number of Loans You Purchased*	Total Amount*

* Include all loans and amounts you purchased even if this institution did not originate them.

PART B: PARTICIPATIONS

Participations You Sold

6. Did you either purchase or sell any interests in participations for, or involving mortgage loans for 1-4 family residential property located in the San Diego SMSA during your "1977" fiscal year? (Do not include participations for, or involving home improvement loans or multi-family dwellings or participation certificates issued by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association or the Farmers Home Administration.)

a. Purchase: Yes ☐ b. Sell: Yes ☐

No ☐ No ☐

(If your answer to 6a and 6b is "no" you have completed the questionnaire)

7. If you sold participations for, or involving mortgage loans for 1-4 family residential property located in the San Diego SMSA and originated in FY 1977, please supply the following information for EACH participation. (NOTE: This question asks you to specify purchases by each institution involved in the participation.)

SAMPLE: For a sample indicating how to report this data, please see Appendix A.

Participation number	Name of institution you sold to	Address	Were all loans originated in FY 1977 (Yes or No)	For those loans originated in FY77: Number of loans sold	→ Total Dollars →	Percentage of total participation comprised by $ value

FORM FOR RESPONSES TO QUESTION 7

8. Were all of the loans listed in question 7 as originated by you in fiscal year "1977" included in Part A (Originations) of your "1977" fiscal year HMDA report, or if you filed with the State of California, were they included in the state report? (See footnote bottom of page two)

Yes ☐ No ☐

If no, please indicate: Total number not included__________,
total amount not included__________.

PARTICIPATIONS PURCHASED

9. If you purchased an interest in a participation for, or involving mortgage loans for 1-4 family residential property located in the San Diego SMSA, please list the following information. (Do not include participations for, or involving home improvement loans, multi-family dwellings, or those loans not originated in FY 1977.)

Name of institution selling loans to you	Address	Number of loans in which participations were purchased	Total amount purchased	Were these purchases includ on your FY "1977 HMDA or State Report (Yes or No

Participation number	Name of institution you sold to	Address	Were all loans originated in FY 1977 (Yes or No)	For those loans originated in FY77 → Number of loans sold	→ Total Dollars	Percentage of total participation comprised by $ value
1	First Savings & Loan	725 Michigan Avenue	Yes	10	150,000	40%
	Filmont Savings & Loan	200 Filmont Avenue	Yes	10	150,000	40%
2	North [illegible] Savings Bank	Cortland Plaza, NY, NY	No	30	450,000	60%
	Savings Bank of Buffalo	575 Main St.	No	10	150,000	20%
	Erie Savings	Archer Trace	No	5	[illegible]	10%

APPENDIX A: SAMPLE OF RESPONSE TO QUESTION 7

APPENDIX C

RESPONSE DATA

The data received from the 53 institutions that submitted positive responses to the questionnaire are included in this appendix. To protect the confidentiality of the information each responding institution has been assigned a numeric designation (e.g., S&L 1, Bank 5, etc.). The data are provided in 10 tables, 5 for banks and 5 for savings and loan associations.

Tables C1 and C6 provide a summary of the data contained in Tables C2-C5 and Tables C7-C10 respectively. These tables itemize and characterize each individual sale and purchase transactions indicated by the 39 banks and the 14 savings and loan associations submitting positive responses to the survey. The following definitions apply to items 1-8 in Table C1 and C6:

Item	Definition
1.	The total amount of the transactions reported by the respondents.
2	The total amount of the transactions where the responding institution reported the origination or the purchase on their Home Mortgage Disclosure Act Statements. The amounts shown in the "SOLD" column are for cases where the loans were included as an origination in the disclosure statement.
3	The amount of the transactions where the responding institution did not indicate whether or not the transaction was reported on the disclosure statement.
4	The amount of the transactions where the responding institution indicated that the origination or the purchase was not included on the disclosure statement. The amounts shown in the "SOLD" column are from cases where the loans were not included as origination in the disclosure statement.

Item	Definition
5	The amount of the transactions where conflicting data were received from two institutions. These are cases where one institution indicated that a transaction took place with a second institution, but where the second institution indicated no such transaction.
6	The amount of the transactions where double counting was confirmed by an identical transaction being indicated by both the seller and the purchaser (i.e., confirmed pair, double counting; CP-D).
7	The amount of the transactions where it was confirmed that double counting did not take place (i.e., confirmed pair no double counting CD-N).
8	The amount of the transactions where an institution indicated a transaction with a second institution, but where no response was received from the second institution
9	The amount of the transactions where the address of one of the involved institutions was different than the address [illegible] the master list used in the study. In these cases it is questionable whether the transaction met the double counting criteria.

Tables C2 to C5 and Tables C7-C10 contain the following codes for ities, institutions, and transactions:

CODE (City, Institution)

C = Chicago
S = San Diego
1 = Received Questionnaire
2 = Did not Receive Questionnaire
3 = Questionable Address

Transaction Code

R = Transaction reported on HMDA
    Y = Yes
    I = Not specified

NP = Non-pair conflicting information from seller and purchase

CP = Confirmed
    D = Confirmed double counting
    N = Confirmed no double counting

PP = Possible pair; information from only one source (i.e., either seller or purchaser)

Item	Definition
5	The amount of the transactions where conflicting data were received from two institutions. These are cases where one institution indicated that a transaction took place with a second institution, but where the second institution indicated no such transaction.
6	The amount of the transactions where double counting was confirmed by an identical transaction being indicated by both the seller and the purchaser (i.e., confirmed pair, double counting; CP-D).
7	The amount of the transactions where it was confirmed that double counting did not take place (i.e., confirmed pair, no double counting; CD-N).
8	The amount of the transactions where an institution indicated a transaction with a second institution, but where no response was received from the second institution.
9	The amount of the transactions where the address of one of the involved institutions was different than the address on the master list used in the study. In these cases, it is questionable whether the transaction met the double counting criteria.

Tables C2 to C5 and Tables C7-C10 contain the following codes for cities, institutions, and transactions:

CODE (City, Institution)

C = Chicago
S = San Diego
1 = Received Questionnaire
2 = Did not Receive Questionnaire
3 = Questionable Address

Transaction Code

R = Transaction reported on HMDA
    Y = Yes
    I = Not specified

NP = Non-pair; conflicting information from seller and purchase

CP = Confirmed
    D = Confirmed double counting
    N = Confirmed no double counting

PP = Possible pair; information from only one source (i.e., either seller or purchaser)

APPENDIX C

RESPONSE DATA

The data received from the 53 institutions that submitted positive responses to the questionnaire are included in this appendix. To protect the confidentiality of the information each responding institutions has been assigned a numeric designation (e.g., S&L 3, Bank 5, etc.). The data are provided in 10 tables, 5 for banks and 5 for savings and loan associations.

Tables C1 and C6 provide a summary of the data contained in Tables C2-C5 and Tables C7-C10 respectively. These tables itemize and characterize each individual sale and purchase transactions indicated by the 39 banks and the 14 savings and loan associations submitting positive responses to the survey. The following definitions apply to items 1-8 in Table C1 and C6:

Item	Definition
1.	The total amount of the transactions reported by the respondents.
2	The total amount of the transactions where the responding institution reported the origination or the purchase on their Home Mortgage Disclosure Act Statements. The amounts shown in the "SOLD" column are for cases where the loans were included as an origination in the disclosure statement.
3	The amount of the transactions where the responding institution did not indicate whether or not the transaction was reported on the disclosure statement.
4	The amount of the transactions where the responding institution indicated that the origination or the purchase was not included on the disclosure statement. The amounts shown in the "SOLD" column are from cases where the loans were not included as origination in the disclosure statement.

Item	Definition
5	The amount of the transactions where conflicting data were received from two institutions. These are cases where one institution indicated that a transaction took place with a second institution, but where the second institution indicated no such transaction.
6	The amount of the transactions where double counting was confirmed by an identical transaction being indicated by both the seller and the purchaser (i.e., confirmed pair, double counting; CP-D).
7	The amount of the transactions where it was confirmed that double counting did not take place (i.e., confirmed pair, no double counting; CD-N).
8	The amount of the transactions where an institution indicated a transaction with a second institution, but where no response was received from the second institution.
9	The amount of the transactions where the address of one of the involved institutions was different than the address on the master list used in the study. In these cases, it is questionable whether the transaction met the double counting criteria.

Tables C2 to C5 and Tables C7-C10 contain the following codes for cities, institutions, and transactions:

CODE (City, Institution)

C = Chicago
S = San Diego
1 = Received Questionnaire
2 = Did not Receive Questionnaire
3 = Questionable Address

Transaction Code

R = Transaction reported on HMDA
    Y = Yes
    I = Not specified

NP = Non-pair; conflicting information from seller and purchase

CP = Confirmed
    D = Confirmed double counting
    N = Confirmed no double counting

PP = Possible pair; information from only one source (i.e., either seller or purchaser)

TABLE C1: SUMMARY OF RESPONSES FROM BANKS

TRANSACTION CHARACTERISTICS	AMOUNT (Dollars)	
	SOLD	PURCHASED
Participations		
1. Reported in Survey	9,644,572	5,577,515
2. Reported on HMDA Reports (Y)	4,251.039	2,694,134
3. Unknown if Reported on HMDA Reports (I)	2,158,184	2.776
4. Not Reported on HMDA Reports (N)	3,235,349	2,861,605
5. Conflicting Data from Two Institutions (NP)	866,779	1.540,730
6. Confirmed Double Counting (CP-D)	100,000	100,000
7. Confirmed No Double Counting (CP-N)	3,235,349	2,861,605
8. Possible Double Counting (PP)	5,445,444	1,837,255
9. Questionable Addresses* (Code 3)	29,000	0
Individual Loans		
1. Reported in Survey	2,015,419	5,914,888
2. Reported on HMDA Reports (Y)	1,543,162	3,419,239
3. Unknown if Reported on HMDA Reports (I)	0	0
4. Not Reported on HMDA Reports (N)	472,257	2,495,649
5. Conflicting Data from Two Institutions (NP)	1,083,154	27,000
6. Confirmed Double Counting (CP-D)	0	0
7. Confirmed No Double Counting (CP-N)	472,257	2,495,649
8. Possible Double Counting (PP)	460,008	3,392,239
9. Questionable Addresses* (Code 3)	0	0

* Included in Possible Double Counting

TABLE C2: PARTICIPATIONS SOLD BY BANKS

SELLER	CODE	PURCHASER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
Bank 8	C-1	Bank 9	C-1	1,058,349	N		N		Not double counting
Bank 11	C-1	Bank 19	C-1	100,000	Y		D		Double-counting
Bank 34	C-1	Bank 59	C-1	150,000	Y			X	
		Bank 60	C-1	50,000	Y	X			
Bank 12	C-1	Bank 49	C-1	21,000	Y	X			
Bank 35	C-1	S&L 37	C-3	29,000	Y			X	Address does not match
Bank 36	C-1	Bank 61	C-1	90,000	I			X	
Bank 37	C-1	S&L 38	C-2	993,184	I			X	All loans not originated in 1977
Bank 38	C-1	Bank 62	C-1	1,075,000	I			X	All loans not originated in 1977
Bank 21	C-1	Bank 63	C-1	1,206,000	Y			X	
Bank 20	C-1	Bank 55	C-1	50,000	N		N		Not double counting
Bank 39	C-1	Bank 64	C-1	574,000	Y			X	
Bank 40	C-1	S&L 39	C-1	1,185,300	Y			X	S&L 39 did not receive questionnaire
		S&L 40	C-2	2,127,000	N		N		Not double counting
Bank 17	C-1	S&L 41	C-2	139,960	Y			X	All loans not originated in 1977
Bank 15	C-1	Bank 50	C-1	400,008	Y	X			
Bank 13	C-1	Bank 50	C-1	395,771	Y	X			

TABLE C3: PARTICIPATIONS PURCHASED BY BANKS

PURCHASER	CODE	SELLER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
Bank 19	C-1	Bank 11	C-1	100,000	Y		D		
Bank 20	C-1	Bank 55	C-1	683,500	Y			X	
Bank 21	C-1	Bank 56	C-1	42,277	Y	X			
Bank 22	C-1	S&L 4	C-1	2,465	Y	X			
Bank 23	C-1	Bank 57	C-1	63,000	Y			X	
Bank 24	C-1	S&L 4	C-1	9,859	N		N		Not double counted
Bank 25	C-1	S&L 42	C-2	70,400	N		N		Not double counted
Bank 3	C-1	Bank 43	C-1	100,000	N		N		Not double counted
Bank 26	C-1	S&L 43	C-2	591,675	N		N		Not double counted
Bank 5	C-1	Bank 55	C-1	100,000	Y			X	Bought from Service Corp. Project c/o Bank 55
Bank 27	C-1	S&L 4	C-1	21,465	Y	X			
Bank 28	C-1	S&L 42	C-2	200,080	Y			X	
		Bank 58	C-1	28,600	Y			X	
Bank 29	C-1	Bank 46	C-1	2,776	Y	X			
Bank 6	C-1	Bank 46	C-1	960,747	Y	X			
Bank 30	C-1	Bank 46	C-1	1,029,108	N		N		Not double counted
Bank 31	C-1	Bank 46	C-1	1,060,563	N		N		Not double counted
Bank 32	C-1	Bank 46	C-1	511,000	Y	X			

TABLE C4: INDIVIDUAL LOANS SOLD BY BANKS

SELLER	CODE	PURCHASER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
Bank 11	C-1	Bank 19	C-1	100,000	N		N		Not double counted
Bank 12	C-1	Bank 49	C-1	170,000	Y	X			
Bank 13	C-1	Bank 50	C-1	395,771	Y	X			
Bank 14	C-1	Bank 51	C-1	397,500	Y	X			
		S&L 44	C-2	35,000	Y			X	
Bank 15	C-1	Bank 50	C-1	400,008	Y			X	Also listed as participations sold
Bank 2	C-1	Bank 52	C-1	25,000	Y			X	
Bank 16	C-1	Bank 53	C-1	119,883	Y	X			
Bank 17	C-1	S&L 8	C-1	259,257	N		N		Not double counted S&L 8 reported purchase
Bank 18	C-1	Bank 54	C-1	113,000	N		N		Not double counted

TABLE C 5: INDIVIDUAL LOANS PURCHASED BY BANKS

PURCHASER	CODE	SELLER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
Bank 1	C-1	Bank 41	C-1	27,000	Y	X			
Bank 2	C-1	Bank 42	C-1	52,000	Y			X	
Bank 3	C-1	Bank 43	C-1	1,000	Y			X	Amount unclear
Bank 4	C-1	Bank 44	C-1	202,806	Y			X	
Bank 6	C-1	Bank 46	C-1	960,747	Y			X	
Bank 7	C-1	Bank 46	C-1	585,214	Y			X	
Bank 8	C-1	Bank 16	C-1	620,000	Y			X	
Bank 9	C-1	Bank 40	C-1	2,495,649	N		N		Not double counted, not reported by bank 40
Bank 10	C-1	Bank 48	C-1	970,472	Y			X	

TABLE C6: SUMMARY OF RESPONSES FROM SAVINGS AND LOAN ASSOCIATIONS

TRANSACTION CHARACTERISTICS	AMOUNT (Dollars)	
	SOLD	PURCHASED
Participations		
1. Reported in Survey	17.638,665	35,618,915
2. Reported on HMDA Report (Y)	17,638,665	19,127,971
3. Unknown if Reported on HMDA Report (I)	0	0
4. Not Reported on HMDA Report (N)	0	16,490,944
5. Conflicting Data from Two Institutions (NP)	2,580,000	3,358,045
6. Confirmed Double Counting (CP-D)	3,501,779	3,501,779
7. Confirmed No Double Counting (CP-N)	0	16,490,944
8. Possible Double Counting (PP)	11,556,886	12,268,147
9. Questionable Addresses* (Code 3)	2,115,230	2,769,302
Individual Loans		
1. Reported in Survey	269,641	259,700
2. Reported on HMDA Report (Y)	269,641	259,700
3. Unknown if Reported on HMDA Report (I)	0	0
4. Not Reported on HMDA Report (N)	0	0
5. Conflicting Data from Two Institutions (NP)	0	0
6. Confirmed Double Counting (CP-D)	0	0
7. Confirmed No Double Counting (CP-N)	0	259,700
8. Possible Double Counting (PP)	269,641	0
9. Questionable Address* (Code 3)	0	0

* Included in Possible Double Counting

TABLE C7: PARTICIPATIONS SOLD BY SAVINGS LOAN ASSOCIATIONS

SELLER	CODE	PURCHASER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
S&L 1	C-1	S&L 23	C-2	118,406	Y			X	
		S&L 25	C-2	1,016,910	Y			X	
		S&L 26	C-2	966,195	Y			X	
		S&L 27	C-2	812,565	Y			X	
		S&L 28	C-3	1,983,869	Y			X	Alton, Illinois
S&L 2	C-1	S&L 23	C-2	250,000	Y			X	
		S&L 27	C-2	3,951,719	Y			X	
S&L 3	C-1	S&L 29	C-3	131,361	Y			X	Ogelsby, Illinois
S&L 4	C-1	S&L 30	C-2	1,395,861	Y			X	
S&L 6	C-1	S&L 12	C-1	2,059,342	Y		D		Confirmed double counting after follow-up
		S&L 35	C-2	930,000	Y			X	
		Bank 65	C-1	2,580,000	Y	X			
S&L 17	C-1	S&L 9	C-1	940,926	Y		D		Confirmed double counting after follow-up
S L 18	C-1	S&L 9	C-1	501,511	Y		D		Confirmed double counting after follow-up

TABLE C8: PARTICIPATIONS PURCHASED BY SAVINGS LOAN ASSOCIATIONS

PURCHASER	CODE	SELLER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
S&L 1	C-1	S&L 15	C-2	525,000	Y			X	
		S&L 16	C-3	791,466	Y			X	Bloomingdale, Illinois
S&L 8	C-1	Bank 46	C-1	3,590,944	N		N		Not double counted
S&L 9	C-1	S&L 17	C-1	940,926	Y		D		Confirmed double counting after follow-up
		S&L 18	C-1	501,511	Y		D		Confirmed double counting after follow-up
S&L 10	C-1	S&L 20	C-1	19,720	Y	X			
		S&L 19	C-2	6,513,120	Y			X	
S&L 11	C-1	S&L 16	C-3	2,004,836	Y			X	Bloomingdale, Illinois
S&L 12	C-1	S&L 6	C-1	2,059,342	Y		D		Confirmed double counting after follow-up
S&L 13	C-1	S&L 21	C-2	12,900,000	N		N		Not double counted
S&L 2	C-1	S&L 23	C-2	255,192	Y			X	
S&L 4	C-1	S&L 24	C-2	2,021,319	Y			X	
S&L 14	S-1	S&L 45	S-1	3,338,325	Y	X			
		S&L 22	S-1	157,214	Y			X	

TABLE C9 : INDIVIDUAL LOANS SOLD BY SAVINGS & LOAN ASSOCIATIONS

SELLER	CODE	PURCHASER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
S&L 8	C-1	S&L 36	C-1	269,641	Y			X	

TABLE C10: INDIVIDUAL LOANS PURCHASED BY SAVINGS & LOAN ASSOCIATIONS

PURCHASER	CODE	SELLER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
S&L 8	C-1	Bank 17	C-1	259,700	Y		N		Not double counted Bank 17 did not report origination

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

ACCURACY OF DISCLOSURE STATEMENT PREPARATION

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

TABLE OF CONTENTS

	Page
FOREWORD	i
SUMMARY	iii
1. INTRODUCTION	1-1
1.1 Purpose	1-1
1.2 Scope	1-1
1.3 Methodology	1-1
1.4 Contents of this Report	1-9
2. BUFFALO	2-1
2.1 Introduction	2-1
2.2 Geocoding Accuracy in the Buffalo SMSA	2-2
2.3 Aggregation Accuracy in the Buffalo SMSA	2-7
3. SAN DIEGO	3-1
3.1 Introduction	3-1
3.2 Geocoding Accuracy in the San Diego SMSA	3-2
3.3 Aggregation Accuracy in the San Diego SMSA	3-5
4. CHICAGO	4-1
4.1 Introduction	4-1
4.2 Geocoding Accuracy in the Chicago SMSA	4-3
4.3 Aggregation Accuracy in the Chicago SMSA	4-8
5. FINDINGS AND CONCLUSIONS	5-1
5.1 Findings on Geocoding Accuracy	5-1
5.2 Findings on Aggregation Accuracy	5-3
5.3 Conclusions	5-7
REFERENCE	R-1
APPENDIX A	A-1
APPENDIX B	B-1
APPENDIX C	C-1

LIST OF TABLES AND FIGURES

Page

Table S.1: Geocoding Accuracy for all Institutions in Buffalo, Chicago, and San Diego v

Table S.2: Geocoding Accuracy vi

Table S.3: Percentage of Aggregation Errors by Institutions in Three SMSAs ix

Figure 1.1: Aggregation Summary Worksheet 1-7

Table 1.1: Example of Error Assessment 1-10

Table 2.1: Geocoding Accuracy Results for Buffalo 2-4

Table 2.2: Geocoding Accuracy for all Institutions in the Buffalo SMSA 2-3

Table 2.3: Comparison of Type of Disclosure Statement, Geocoding Methods and Accuracy Achieved . . . 2-6

Table 2.4: Number of Aggregation Errors for Sampled Institutions in the Buffalo Area 2-8

Table 2.5: Number and Amount of Aggregation Errors for Sampled Institutions in Buffalo SMSA 2-9

Table 2.6: Analysis of Aggregation Errors for the Buffalo SMSA 2-11

Table 3.1: Geocoding Accuracy Results for San Diego 3-4

Table 3.2: Geocoding Accuracy for all Institutions in the San Diego SMSA 3-3

Table 3.3: Comparison of Type of Disclosure Statement Geocoding Methods and Accuracy Achieved . . . 3-6

Table 3.4: Number of Aggregation Errors for Sampled Institutions in the San Diego SMSA 3-7

Table 3.5: Number and Amount of Aggregation Errors for Sampled Institutions in the San Diego SMSA. . . 3-9

Table 3.6: Analysis of Aggregation Errors for the San Diego SMSA 3-11

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
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- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns

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- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Uses of the Home Mortgage Disclosure Act Data
- Assessment of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods of improving the industries' ability to comply with the requirements of the Act and Regulation C.

This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of this report is to present study findings on the accuracy with which census tracts were assigned to property addresses, and individual loan data were aggregated and reported in 1977 Federal and state home mortgage disclosure statements.

SCOPE

This report presents the findings of a study conducted to evaluate the accuracy of geocoding and aggregation on home mortgage disclosure statements. Study of geocoding measures the accuracy with which depository institution personnel assigned census tracts to the property addresses of loans subject to disclosure reporting. Aggregation involves the accuracy with which data on loans (e.g., census tract, amount, type) were collected, aggregated, and reported on disclosure statements. Together, assessment of these two issues provides a measure of how accurately the disclosure statements prepared by subject institutions reflect their actual lending patterns.

METHODOLOGY

The population from which those institutions participating in the study were selected were those depository institutions in the Buffalo, Chicago, and San Diego Standard Metropolitan Statistical Areas (SMSAs) required to prepare mortgage disclosure statements in 1977 under the provisions of Regulation C or "substantially similar" state regulations. Data for analysis of geocoding and aggregation were obtained from sample of institutions randomly selected from this population. The procedures used to conduct the sampling are outlined briefly in Chapter 1 and at greater length in Appendix A, Recommended Procedures for Phase II Statistical Sample Design.

FINDINGS ON GEOCODING ACCURACY

Using the data collected on geocoding in the three SMSAs and the statistical procedures discussed in Appendix A, statistically valid estimate of the geocoding accuracy of the institutions in each of the three SMSAs was derived. The results for the three SMSAs expressed in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval, are shown in Table S.1.

TABLE S.1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN BUFFALO, CHICAGO, AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
Mean Percentage of Accuracy	93.16	92.05	82.27
Standard Percentage of Error	1.51	1.49	3.11
95 Percent Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

The results of the geocoding accuracy analysis can be expressed on either a "per-institution" or "per-SMSA" basis. For the Buffalo SMSA, for example, it can be stated with 95 percent confidence, that the accuracy with which institutions in the Buffalo SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement for the Buffalo SMSA lies between 90.2 and 96. percent. Seen on a per-institution basis, however, it can be stated that there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 90.2 and 96.1 percent. Similar conclusions can be drawn based on the data for institutions in the San Diego and Chicago SMSAs.

The results of the analysis of geocoding accuracy show that depository institutions in the Buffalo and San Diego SMSAs are achieving acceptable geocoding accuracy levels, but that approximately 35 percent of the depository institutions in Chicago are achieving unacceptable accuracy levels below 80 percent. These results are summarized in Table S.2.

TABLE C9 : INDIVIDUAL LOANS SOLD BY SAVINGS & LOAN ASSOCIATIONS

SELLER	CODE	PURCHASER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
S&L 8	C-1	S&L 36	C-1	269,641	Y			X	

TABLE C10: INDIVIDUAL LOANS PURCHASED BY SAVINGS & LOAN ASSOCIATIONS

PURCHASER	CODE	SELLER	CODE	AMOUNT (Dollars)	TRANSACTION CODE				COMMENTS
					R	NP	CP	PP	
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TABLE OF CONTENTS

	Page
FOREWORD	i
SUMMARY	iii
1. INTRODUCTION	1-1
1.1 Purpose	1-1
1.2 Scope	1-1
1.3 Methodology	1-1
1.4 Contents of this Report	1-9
2. BUFFALO	2-1
2.1 Introduction	2-1
2.2 Geocoding Accuracy in the Buffalo SMSA	2-2
2.3 Aggregation Accuracy in the Buffalo SMSA	2-7
3. SAN DIEGO	3-1
3.1 Introduction	3-1
3.2 Geocoding Accuracy in the San Diego SMSA	3-2
3.3 Aggregation Accuracy in the San Diego SMSA	3-5
4. CHICAGO	4-1
4.1 Introduction	4-1
4.2 Geocoding Accuracy in the Chicago SMSA	4-3
4.3 Aggregation Accuracy in the Chicago SMSA	4-8
5. FINDINGS AND CONCLUSIONS	5-1
5.1 Findings on Geocoding Accuracy	5-1
5.2 Findings on Aggregation Accuracy	5-3
5.3 Conclusions	5-7
REFERENCE	R-1
APPENDIX A	A-1
APPENDIX B	B-1
APPENDIX C	C-1

LIST OF TABLES AND FIGURES

Page

Table S.1: Geocoding Accuracy for all Institutions in Buffalo, Chicago, and San Diego v

Table S.2: Geocoding Accuracy vi

Table S.3: Percentage of Aggregation Errors by Institutions in Three SMSAs ix

Figure 1.1: Aggregation Summary Worksheet 1-7

Table 1.1: Example of Error Assessment 1-10

Table 2.1: Geocoding Accuracy Results for Buffalo 2-4

Table 2.2: Geocoding Accuracy for all Institutions in the Buffalo SMSA 2-3

Table 2.3: Comparison of Type of Disclosure Statement, Geocoding Methods and Accuracy Achieved . . . 2-6

Table 2.4: Number of Aggregation Errors for Sampled Institutions in the Buffalo Area 2-8

Table 2.5: Number and Amount of Aggregation Errors for Sampled Institutions in Buffalo SMSA 2-9

Table 2.6: Analysis of Aggregation Errors for the Buffalo SMSA 2-11

Table 3.1: Geocoding Accuracy Results for San Diego 3-4

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Table 3.3: Comparison of Type of Disclosure Statement Geocoding Methods and Accuracy Achieved . . . 3-6

Table 3.4: Number of Aggregation Errors for Sampled Institutions in the San Diego SMSA 3-7

Table 3.5: Number and Amount of Aggregation Errors for Sampled Institutions in the San Diego SMSA. . . 3-9

Table 3.6: Analysis of Aggregation Errors for the San Diego SMSA 3-11

LIST OF TABLES AND FIGURES (Continued)

Page

Table 4.1: Geocoding Accuracy Results for Chicago 4-5

Table 4.2: Geocoding Accuracy for all Institutions in the Chicago SMSA 4-4

Table 4.3: Comparison of Type of Disclosure Statement, Geocoding Methods, and Accuracy Achieved . . . 4-7

Table 4.4: Number of Aggregation Errors for Sampled Institutions in the Chicago SMSA 4-10

Table 4.5: Number and Amount of Aggregation Errors for Sampled Institutions in Chicago SMSA . . . 4-12

Table 4.6: Analysis of Agregation Errors for the Chicago Area 4-14

Table 5.1: Geocoding Accuracy for all Institutions in Buffalo, Chicago, and San Diego 5-1

Table 5.2: Geocoding Accuracy 5-2

Table 5.3: Percentage of Aggregation Errors by Institutions in Three SMSAs 5-6

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METHODOLOGY

The population from which those institutions participating in the study were selected were those depository institutions in the Buffalo, Chicago, and San Diego Standard Metropolitan Statistical Areas (SMSAs) required to prepare mortgage disclosure statements in 1977 under the provisions of Regulation C or "substantially similar" state regulations. Data for analysis of geocoding and aggregation were obtained from a sample of institutions randomly selected from this population. The procedures used to conduct the sampling are outlined briefly in Chapter and at greater length in Appendix A, *Recommended Procedures for Phase II Statistical Sample Design*.

ON GEOCODING ACCURACY

ng the dat collected on geocoding in the three SMSAs and the
al procedures discussed in Appendix A, a statistically valid
of the geocoding accuracy of the institutions in each of the three
derived. The results for the three SMSAs, expressed in terms of
percentage of accuracy for all institutions, the standard error,
5 percent confidence interval, are shown in Table S.1.

TABLE S.1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN BUFFALO, CHICAGO AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
rcentage of Accuracy	93.16	92.05	82.27
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nt Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

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ons in the Buffalo and San Diego SMSAs are achieving acceptable
accuracy levels but that approximately 35 percent of the depository
ons in Chicago are achieving unacceptable accuracy levels below
:. These results are summarized in Table S.2.

TABLE S.2: GEOCODING ACCURACY

SMSA	Number of Institutions Sampled	Accuracy ≥ 80% Number	Accuracy ≥ 80% Percent	Accuracy ≥ 85% Number	Accuracy ≥ 85% Percent	Accuracy ≥ 90% Number	Accuracy ≥ 90% Percent
Buffalo	8	8	100	7	87.5	6	75
Chicago	26	17	65	16	61.5	13	50
San Diego	10	10	100	10	100	7	70
Total	44	35	79.5	33	75	27	61

The accuracy results for the Chicago SMSA show that geocoding can be performed accurately, if the currently available address coding guides are obtained and used properly and if the census tract numbers assigned to addresses are accurately recorded and maintained on files for subsequent use in the preparation of the disclosure statement.

Two reasons account for the low accuracy levels achieved by nine of of the twenty six sampled institutions in Chicago. Six of the nine relied solely on census tract maps or other maps to perform geocoding. Such maps, by themselves, are not adequate for geocoding. Three of the nine either did not use address coding guides properly or did not accurately record and maintain the results of their geocoding of addresses to census tracts. A companion report entitled "Methods to Improve Geocoding Accuracy"[1] suggests that regulatory examination procedures include a review of the geocoding methods used by depository institutions and recommendations for use of proper geocoding tools (i.e., address coding guides) and record maintenance methods.

FINDINGS ON AGGREGATION ACCURACY

Study of aggregation accuracy involves the determination of the accuracy with which data on loans (i.e., census tract amount, type) were collected, aggregated, and reported on disclosure statements. Results of aggregation accuracy were obtained for 43 institutions in three SMSAs -- Buffalo, San Diego, and Chicago. Aggregation errors of four types were defined and analyzed:

> Census tract assignment errors occur when a loan is incorrectly included in a census tract line or when a loan is incorrectly excluded from a census tract line.
>
> Computation errors occur when either the number of the dollar amounts of loans on the disclosure statement are incorrect.
>
> Inappropriate loan errors occur when a loan that does not meet the Regulation C criteria for inclusion in a disclosure statement is included in a disclosure statement.
>
> Types of loan errors fall into two categories. The first category occurs when an institution assigns a loan to one type of loan column when in fact the loan belongs in another type of loan column (e.g., FHA instead of conventional). The second category involves nonoccupant loans and occur either when nonoccupant loans are reported only in the nonoccupant addendum item column and are not spread throughout the other appropriate columns, or when nonoccupant loans are not included in the nonoccupant addendum item column.

Findings on the level of the four types of errors for the institutions in the three SMSAs are presented in Chapters 2, 3, and 4 of this report.

Four of the eight sampled institutions in the Buffalo SMSA made aggregation errors in more than 50 percent of census tract lines sampled. The most significant problem was census tract assignment errors caused by either incorrectly aggregating loans into a census tract line or incorrectly omitting loans from a census tract line. These errors occured because of inadequacies in the institution' procedures for selecting loans from the file, transferring these data to other files, and aggregating the data into the disclosure statement. This causes loans to be over-disclosed or under-disclosed in the census tract line. A total of 99 loans were over-disclosed and 82 loans were under-disclosed in the 210 census tracts in the sample.

Three of the ten sampled institutions in the San Diego SMSA made errors in more than 50 percent of the census tract lines in the samples. The two most significant problems were census tract assignment errors and the inappropriate inclusion of short-term construction loans. A total of 217 loans were over disclosed and 81 loans were under disclosed in the 25 census tracts in the sample. A total of 43 inappropriate loans with a value in excess of $20 million were included in these census racts. Many of these were short-term condominium construction loans in excess of $1 million each.

Eighteen of the 25 sampled institutions in the Chicago SMSA made errors in more than 50 percent of the census tract lines in the sample. Census tract assignment errors were the most significant problem. A total of 2,270 loans were over disclosed and 579 loans were under-disclosed in the 435 census tracts in the sample.

The number of aggregation errors and the dollar amount of the aggregation errors found in each sampling unit of 15 census tracts are only meaningful when viewed relative to the overall number and amount of loans that were included in the census tracts. Accordingly, two major indices, expressed as percentages are used in this analysis to assess each institution' aggregation error level. The first index is the number of errors made per census tract relative to the number of loans per census tract. The second index is the dollar amount of errors made per census tract relative to the dollar amount of loans per census tract. Some institutions incurred significant error levels on the basis of the number of errors per loan in each census tract, while other institutions incurred significant error levels on the basis of the amount of error per amount of loans in each census tract.

A judgment was made that error levels in excess of 20 percent, on the basis of either the number or the amount of error render a disclosure statement too misleading to be considered acceptable. An error level between 10 to 20 percent was judged to render the acceptability of a disclosure statement to be marginal. An error level of less than 10 percent was judged to result in an acceptably accurate disclosure statement.

Table S.3 presents the results from the aggregation analysis for the 43 institutions in the three SMSAs. The number and percentage of institutions that were found to be in each of the three error levels are shown in the table. An institution was plated in one of the three error levels in accordance with the higher of its two error levels (i.e., number or amount of errors).

TABLE S.3: PERCENTAGE OF AGGREGATION ERRORS
BY INSTITUTIONS IN THREE SMSAs

Error Level Per Census Tract	SMSA						TOTAL	
	Buffalo Institutions		San Diego Institutions		Chicago Institutions			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-10 Percent	1	12.5	2	20	2	8	5	11.6
10-20 Percent	3	37.5	3	30	3	12	9	20.9
Greater than 20 Percent	4	50.0	5	50	20	80	29	67.5

Four of the eight institutions in Buffalo SMSA incurred per-tract-error levels greater than 20 percent, and three of the eight incurred per-tract-error levels between 10 and 20 percent. Only one institution incurred a per-tract error level of less than 10 percent.

Five of the ten institutions in the San Diego SMSA incurred per-tract-error rates greater than 20 percent, three of ten incurred per-tract-error levels btween 10 and 20 percent, and two incurred per-tract-error levels of less than ten percent.

Twenty of the twenty-five institutions in the Chicago SMSA incurred per-tract-error levels greater than 20 percent, three of twenty-five incurred per-tract-error levels between 10 and 20 percent, and two institutions incurred per-tract-error levels of less than 10 percent.

Although these findings of aggregation accuracy are not based upon a statistically derived sample for the SMSA, they do provide strong evidence that depository institutions are not aggregating the disclosure data accurately. Two steps to overcome this deficiency are suggested in a companion report entitled "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statement."[2] First it is suggested that institutions be required to maintain a loan listing containing complete information (e.g., loan number, type of loan, census tract, etc.) on each loan in the disclosure statement. Second, it is suggested that regulatory examiners "spot check" the accuracy of aggregation using procedures outlined in the companion report.

CONCLUSION

A companion study report entitled "Utility of the Home Mortgage Disclosure Act"[3] presents an assessment of the usefulness and cost of the Home Mortgage Disclosure Act. The conclusion is reached that the Home Mortgage Disclosure Act should be extended. However, this conclusion is based upon several conditions, one being that the regulatory agencies take appropriate steps to ensure that the data disclosed are accurate.

CHAPTER I

INTRODUCTION

1.1 PURPOSE

The purpose of this report is to present study findings on the accuracy with which census tracts were assigned to property addresses, and individual loan data were aggregated and reported in 1977 Federal and state home mortgage disclosure statements.

1.2 SCOPE

This report presents the findings of a study conducted to evaluate the two central issues related to the accuracy of home mortgage disclosure statements: geocoding and aggregation. Study of geocoding measures the accuracy with which depository institution personnel assigned census tracts to the property addresses of loans subject to disclosure reporting. Aggregation involves the accuracy with which data on loans (i.e., census tract, amount, type) were collected, aggregated, and reported on disclosure statements. Together, assessment of these two issues provide a measure of how accurately the disclosure statements prepared by subject institutions reflect their actual lending patterns.

1.3 METHODOLOGY

The overall study population was comprised of those depository institutions in the Buffalo, Chicago, and San Diego Standard Metropolitan Statistical Areas (SMSAs) required to prepare disclosure statements in 1977 under the provisions of Regulation C or "substantially similar" state regulations. Data for analysis of geocoding and aggregation were obtained from a sample of institutions randomly selected from this population. The procedures used to conduct the sampling are outlined briefly in this chapter, and at greater length in Appendix A, Recommended Procedures for Phase II Statistical Sample Design.

The data on geocoding and accuracy were obtained during extensive audits of the selected institutions Prior to conducting the full scale audit, a pretest of a sample of six institutions was conducted to verify the validity and viability of the procedures to be used. A report detailing procedures for both the pretest and audit was submitted to the Federal Home Loan Bank Board and Federal Deposit Insurance Corporation for consideration on February 27 1978. This report is included here as Appendix B, Recommended Procedures for Phase II Accuracy Audit and Pretest Plan. The procedures outlined in this report were approved by representatives of the regulatory agencies and a pretest of audit procedures was subsequently conducted in three institutions in the Chicago SMSA, and three institutions in the San Diego SMSA. The results of the procedures used during the pretest were acceptable and the regulatory agencies directed JRB to begin the full audit in September 1978.

The initial step in conducting the audit was selecting the institutions in the sample. This selection was done in accordance with procedures outlined in Appendix A. The sampling procedure was random and was based on a list provided to JRB of all institutions subject to reporting requirements in the three SMSAs and their number of mortgage loans originated in 1977. Each institution selected for participation in the study was notified by the appropriate regulatory agency Those institutions declining to participate were replaced using the same sampling techniques previously utilized.

For the audit to be conducted, the following information had to be obtained:

1. For each institution to be sampled, a copy of the 1977 disclosure statement.
2. For each institution to be sampled, a listing--by loan number--of all mortgage loans made in 1977 within the specified SMSA.
3. For each mortgage loan selected for geocoding analysis; a listing of the mortgage loan number, the complete property address (street, city, state, zip code), and the census tract.

4. For each of the 15 census tracts selected for aggregation analysis, an extract from the mortgage file of the following information on all single family, multifamily, home improvement and non-occupant loans: census tract, dollar amount of loan, type of loan (FHA, VA FmHA, Conventional) home improvement indicator, nonoccupant indicator, multifamily dwelling indicator, and originated or purchased indicator.

Each institution participating in the study was asked to provide the regulatory agencies with a copy of their 1977 disclosure statement, and a listing of property addresses and census tract assignments included in their 1977 disclosure statements. In addition, participating institutions were asked to complete and return to the regulatory agencies brief questionnaire on their procedures and costs associated with disclosure statement preparation. This questionnaire is included as Appendix C of this report Other data required for the study (i.e., item 4, above) were obtained by the regulatory examiners from the participating institutions. Prior to conducting the audit, the disclosure statement, loan listings, and completed questionnaires were forwarded to JRB by the regulatory agenices.

After obtaining the required information, JRB initiated the geocoding and aggregation audits using procedures delimiated in Appendices A and B. The analysis was based on a two-stage sampling plan. In this two-stage sampling plan, each institution is called a primary sampling unit and the loans and census tracts are called sampling subunits. The first stage of the sampling plan involves selection of sample of primary sampling units where the probability of selection is proportional to the size of the unit (i.e., the number of loans disclosed) The second stage involves selecting a constant number of subunits (i.e., 50 loans and 1 ensus tract from each selected primary sampling nit using random sampling. This approach ensures that each loan within a SMSA has an equal probability of being sampled. The number of primary sampling units selected for the Buffalo, San Diego and Chicago SMSAs was 14, 15, and 30, respectively. Since the primary sampling units (i.e., institutions) were selected with replacement, more than one primary sampling unit was drawn from some institutions.

In summary form, initial procedures involved:

1. Numbering each address on the loan listing and randomly selecting 50 loans for each sampling unit. These addresses were then regeocoded for analysis.

2. Recording each census tract on the disclosure statement in descending order using the total number of loans made. From this list, 15 tracts for each sampling unit were randomly selected. The identity of the tracts selected was conveyed to the regulatory agencies, who then used agency personnel to extract the necessary individual loan data from the institution's files. These data were then provided to JRB for aggregation analysis.

3. Reviewing the completed questionnaires for completeness and consistency identifying areas of uncertainty for review during the site visit to the institution.

It was necessary, for purposes of the analysis of geocoding accuracy, to obtain the property address and the census tract assigned by the institution for each of the 50 loans in the sampling unit. Institutions that could provide these data from automated loan files or existing manual files were permitted to do so. For analysis of geocoding accuracy, therefore, when such sources existed, they were considered to be ground truth [illegible] terms of reflecting the results of the institution's geocoding. For the aggregation analysis however computerized or intermediate manual files were not considered acceptable as ground truth. For this phase of the audit, the examiners extracted the required information from the individual loan jacket files.

It should be noted that JRB had no means to validate independently the data extracted by the regulatory examiners. The procedures followed by examiners do provide reasonable assurances that reliable data were extracted for the loans sought. In general, the examiners extracted data from the loan files or jackets for loans that [illegible] listed on the institution's working papers used in the preparation of their 1977 disclosure statement. The examiners felt confident that highly reliable data were extracted for these loans and for purposes of aggregation accuracy, these data were regarded as ground truth.

Based upon the procedures outlined above and in Appendices A and B, the audit of geocoding and aggregation accuracy was conducted.

Geocoding Analysis: A JRB analyst entered onto a worksheet the property address and census tract number assigned by the institution for each of the 50 loans from each geocoding sampling unit. Using the Census Tract Address Coding Guide (ACG)* for the appropriate SMSA, the analyst then attempted to regeocode each loan. If an address was not available in the reference materials, it was classified as "not found." Addresses that were found to be geocoded incorrectly by the institution were regeocoded a second time to preclude the possibility of error on the part of the analytical team. Finally the number of addresses that were correctly and incorrectly geocoded was totaled for each sampling unit to provide the data for subsequent SMSA geocoding analysis. As stated in the sampling procedures, the purpose of the geocoding analysis was to investigate the accuracy of geocoding at the SMSA level. Based on these procedures, it has been possible to generate an arithmetic mean and standard error with a 95 percent confidence level for the geocoding accuracy in the Buffalo, San Diego, and Chicago SMSAs.

Aggregation Analysis: Analyzing the accuracy of aggregated mortgage data on disclosure statements is a complex task for numerous reasons. These include:

- For each loan to be reviewed, eight items of data must be identified
- Data must be obtained from source documents contained in the loan jackets
- The confidential nature of the data necessitate that the information be extracted by regulatory agency personnel
- A given loan on a dislcosure statement may be misreported in a variety of ways
- No standard format exists for the disclosure statements
- State reporting requirements differ from Regulation C
- State reporting requirements differ from each other.

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*The Census Tract Address Coding Guide prepared by Ruben H. Donnelly for the Savings Institutions Management Sciences, Inc.

To assist in the extraction of aggregation data, JRB designed a series of worksheets included here in Appendix B. These worksheets were for use by the examiners in extracting data, and by our analytical staff in analyzing the data. The purpose of these worksheets was to enable a given census tract line item to be recreated using data extracted by the examiner from the mortgage loan files of the selected institution. This recreated line item was then compared with the original census tract line item reported on the disclosure statement. Discrepancies between the two line items were recorded on an Aggregation Summary Worksheet included here as Figure 1.1. This worksheet presents four types of inconsistencies, which are defined as follows:

Census tract assignment errors occur when a loan is incorrectly included in a census tract line or when a loan is incorrectly excluded from a census tract line. Such assignment errors cause the census tract line to show either a greater or lesser number and dollar amount of loans than should be shown. During this analysis, instances occurred where the number of loans shown in the disclosure statement for particular census tract (i.e., row) and type of loans (i.e. column) agreed with the number of loans found by the examiner; whereas, the amount of loans in the statement differed from those found by the examiner by amount approximately equal to an average loan amount. In these instances, and where the error could not be attributed to a loan that does not meet the Regulation C criteria for inclusion on the disclosure statement, the discrepancy was counted as a census tract assignment error.

Computation errors occur when either the number or the dollar amounts of loans on the disclosure statement are incorrect. These errors can either be caused by selecting an incorrect value (e.g., loan amount) or by a mathematical error during the summation process.

Inappropriate loan errors occur when a loan that does not meet the Regulation C criteria is included in a disclosure statement.

INSTITUTION: ______________________

SMSA: ______________________

DATE: ______________________

CENSUS TRACT	TYPE OF ERROR							SUMMARY		
	ASSIGNMENT		COMPUTATION		PURCHASED/ORIGIN		TYPE OF LOAN	NUMBER OF ERRORS	AMOUNT	
	NUMBER	AMOUNT	NUMBER	AMOUNT	NUMBER	AMOUNT	NUMBER		CUMULATIVE	NET
TOTAL										

FIGURE 1.1: AGGREGATION SUMMARY WORKSHEET

Types of loan errors fall into two categories. The first category occurs when an institution assigns a loan to one type of loan column when in fact the loan belongs in another type of loan column (e.g., FHA instead of conventional). This type of error is designated and counted on the worksheet as an error in the number of loans but not in the amount of loans. This convention was adopted because in such cases, a summation of all loan amounts for the census tract line will (assuming no other errors be mathematically correct. The second category involves nonoccupant loans and these errors occur in two ways. The first occurs when nonoccupant loans are reported only in the nonoccupant addendum item column and are not spread throughout the other appropriate columns. The second occurs when nonoccupant loans are not included in the nonoccupant addendum item column. Errors associated with nonoccupant loans are designated and counted on the worksheets by both number of loans and dollar amounts.

The number of aggregation errors and the dollar amount of the aggregation errors found in each sampling unit of 15 census tracts are not particularly informative unless they are viewed relative to the number and amount of loans in the overall disclosure statement and to the average number and amount of loans per census tract. Accordingly, the index used to assess the significance of the number of aggregation errors made by an institution is:

$$\text{PERCENTAGE OF THE NUMBER OF ERRORS PER CENSUS TRACT} = \frac{\text{Average Number of Errors Per Census Tract}}{\text{Average Number of Loans Per Census Tract}} \text{ X } (100)$$

The index used to assess the significance of the amount of aggregation errors made by the institution is:

$$\text{PERCENTAGE OF THE AMOUNT OF ERRORS PER CENSUS TRACT} = \frac{\text{Average Amount of Error Per Census Tract}}{\text{Average Amount of Loans Per Census Tract}} \text{ X } (100)$$

The insights provided by these two indices can be seen by an example that compares two institutions, A and B. Table 1.1 shows the lending data and the comparative assessment of the aggregation errors made by these two hypothetical institutions. Institution A originated 3,600 loans in 120 census tracts, while Institution originated 640 loans in 80 census tracts. Institution A originated an average of 30 loans at a dollar value of $900,000 in each census tract, while Institution B originated an average of eight loans at a dollar value of $224,000 in each census tract. Both institutions made an average of two aggregation errors at a dollar value of $65,000 per census tract line. However, the rate of error for Institution B was much higher than for Institution A. Institution B made an average of two errors for every eight loans that were aggregated into a census tract line (i.e., 25 percent); whereas, Institution B made an average of only two errors for every 30 loans (i.e., 6.6 percent) that were aggregated into a census tract line.

In general, we believe a per-tract-error rate of 20 percent or more in either the number or dollar amounts of loans renders a disclosure statement too inaccurate to be acceptable. An error rate less than 10 percent was judged to result in an acceptably accurate disclosure statement and an error rate between 10 and 20 percent was judged to render the acceptability of the disclosure statement to be marginal. On this basis the disclosure statement of Institution B is too misleading to be acceptable, and the disclosure statement of Institution A is acceptable.

1.4 CONTENTS OF THE REPORT

Chapters 2, 3, and 4 present results of the analysis of accuracy of geocoding and aggregation in the Buffalo, San Diego, and Chicago SMSAs. Each of these chapters begins with a section providing background information on the number and type of institutions required to prepare disclosure statements in 1977, and the compositions of the sampled population. Succeeding sections in each chapter present the study findings on geocoding accuracy and aggregation accuracy. Chapter 5 of this report presents the overall conclusions and observations based upon the results of the accuracy study.

TABLE 1.1: EXAMPLE OF ERROR ASSESSMENT

Loan Data	Institution A	Institution B
a. Total Number of Loans in Disclosure Statement	3,600	
b. Total Amount of loans in Disclosure Statement	$10.8 million	$2.24 Million
c. Total Number of Census Tracts in Disclosure Statement	120	180
d. Average Number of Loans per Census Tract	30	8
e. Average Amount of Loans per Census Tract	$900,000	$224,000
Error Assessment	**Institution A**	**Institution B**
f. Average Number of Errors per Census Tract	2	2
g. Average Amount of Error per Census Tract	$65,000	$65,000
h. Percentage of the Number of Errors per Census Tract	6.6	25
i. Percentage of the Amount of Errors per Census Tract	7.2	29

CHAPTER 2

BUFFALO

2.1 INTRODUCTION

Twenty-two depository institutions were required to prepare disclosure statements under Federal or state regulations in the Buffalo Standard Metropolitan Statistical Area (SMSA) during 1977 Eight of these institutions were required to prepare their disclosure statements under Regulation C and 14 institutions were required to prepare their disclosure statements under Appendix 9 of the New York State Banking Department's Supervisory Procedures G107. These twenty-two institutions ncluded twelve commercial banks, five mutual savings banks, and five savings and loan associations.

The statistical sampling procedures discussed in Chapter 1 and Appendix A were used to select from among the 22 institutions 15 sampling units of 50 loans each for purposes of assessing the accuracy of geocoding at the SMSA level.

This sampling procedure resulted in the initial selection of nine depository institutions from which the 15 sampling units were to be drawn. Each selected institution was contacted by the appropriate regulatory agency and asked to participate in the study. Two of the original nine selected institutions declined to participate in the study. One institution was replaced by a randomly selected alternate institution, and this resulted in a study sample of eight institutions and fourteen sampling units. The eight institutions which participated in the accuracy audit were under the jurisdiction of four different regulatory agencies:

Regulatory Agency	Number of Institutions
Federal Home Loan Bank Board	2
Federal Deposit Insurance Corporation	4
Board of Governors Federal Reserve System	1
Office of the Comptroller of the Currency	1

The number of loans on the disclosure statements of the eight institutions selected in the Buffalo SMSA ranged from a low of 150 to a high of 3,457. The total dollar amount of loans represented on disclosure statements ranged from a low of $1,764,000 to a high of $75,206,000.

The statistical sampling procedures resulted in one sampling unit being drawn from five of the eight institutions. Each of these sampling units consisted of 50 loans for geocoding analysis and 15 census tracts for aggregation analysis. The number of sampling units drawn from the other three institutions was 4,3, and 2, respectively.

Data required to assess the accuracy with which institutions in the Buffalo SMSA geocode property addresses to census tracts were collected and analyzed. The results of this analysis are presented in Section 2.2. A random sample of 15 census tracts was selected for each of the 14 sampling units for purposes of assessing the accuracy with which the eight selected institutions aggregated the data in their dislcosure statement. From this sample, the data needed to assess the accuracy of aggregation were collected and analyzed. The results of this analysis are presented in Section 2.3.

2.2 GEOCODING ACCURACY IN THE BUFFALO SMSA

Using the procedures discussed in Chapter 1 and Appendices A and B of this report, 50 loans were randomly selected for each of the 14 sampling units. The loans were selected from the 1977 loan roster provided by each of the eight depository institutions. The property address for each selected loan in the loan roster was regeocoded to its appropriate census tract using the Census Tract Address Coding Guide (ACG).

The ACG used in the regeocoding effort contains address information as of September 1, 1975, and it does not include property addresses that were established after that date. Consequently, some of the property addresses that were selected for regeocoding were not included in the ACG. These addresses were eliminated from consideration, and only those property addresses included in the ACG were regeocoded and considered in the calculation of the institution's percentage of geocoding accuracy.

Once the property addresses for each sampling unit were regeocoded to the appropriate census tract these results were compared with the geocoding assignments made by the institution. When a discrepancy occurred between the two assignments, the property address was regeocoded a second time. Discrepancies which remained were considered to be an incorrect assignment by the institution.

Table 2.1 shows the geocoding accuracy findings for the eight institutions and fourteen sampling units. The percentage of accuracy ranged from a low of 83 percent to a high of 100 percent. The geocoding accuracy was 90 percent or greater in ten of the fourteen sampling units.

Using the data in Table 2.1 and the statistical procedures discussed in Appendix A (see page 10, Paragraph 3), a statistical estimate was made of the geocoding accuracy of all 22 institutions in the Buffalo SMSA. These results are shown in Table 2.2 in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 2.2: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE BUFFALO SMSA

Item	Value
Number of Sampling Units	14
Mean Percentage of Accuracy	93.16%
Standard Percentage of Error	1.51%
95 Percent Confidence Interval	90.2 % to 96.1%

TABLE 2.1: GEOCODING ACCURACY RESULTS FOR BUFFALO

INSTITUTION DESIGNATION	SAMPLING UNIT	Addresses Not Found		Incorrect Assignments		Correct Assignments	
		Number	Percent	Number	Percent	Number	Percent
Buffalo - 1	1	27	54	1	4	22	97
Buffalo - 2	2	0	0	1	2	39	98
Buffalo - 2	3	5	10	2	4	43	96
Buffalo - 2	4	3	6	0	0	47	100
Buffalo - 2	5	1	2	2	3	47	97
Buffalo - 3	6	11	22	1	3	38	97
Buffalo - 3	7	7	14	4	10	39	90
Buffalo - 3	8	12	24	4	11	34	89
Buffalo - 4	9	14	28	5	14	31	86
Buffalo - 5	10	15	30	0	0	35	100
Buffalo - 6	11	21	42	3	10	26	90
Buffalo - 7	12	5	10	1	2	44	98
Buffalo - 8	13	7	14	7	17	36	83
Buffalo - 8	14	12	29	6	16	32	84

The mean percentage of geocoding accuracy for the 14 sampling units is 93.16 percent, and the standard error—at the 95 percent confidence level—is 1.51. Thus, it can be stated, with 95 percent confidence, that the accuracy with which the 22 institutions in the Buffalo SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement for the Buffalo SMSA lies between 90.2 and 96.1 percent. Stated another way, there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 90.2 and 96.1 percent.

The relatively high degree of geocoding accuracy within the Buffalo SMSA is undoubtedly influenced by the relatively small size of the SMSA, its relatively slow growth, and the availability of reliable manual and automated geocoding tools. An analysis of the geocoding techniques used by the eight depository institutions revealed no significant factor accounting for the variation in the accuracy of geocoding among these institutions. Table 2.3 shows the type of disclosure statement (i.e., Federal or state), the method of geocoding and the percentage accuracy achieved by each of the eight depository institutions studied in the Buffalo SMSA. Five institutions used the same external service bureau for geocoding and the accuracy that was achieved ranged from 86 100 percent. One institution used an internal automated address matching program and this institution achieved 97 percent accuracy. One of the two institutions that used manual geocoding procedures achieved 97 percent accuracy, while the other achieved 84 percent accuracy.

Similarly, whether an institution prepared a Federal or state report appeared to have no significant impact on its level of geocoding accuracy. This is surprising in light of the fact that institutions preparing a state report under New York Law G107 are permitted to omit 15 percent of their loans from disclosure statements. In spite of this stipulation, institutions preparing Federal reports achieved geocoding accuracy levels of 97, 86, and 83.5, while those preparing state reports achieved comparable levels of 97, 92, 100, 90, and 98 percent.

TABLE 2.3: COMPARISON OF TYPE OF DISCLOSURE STATEMENT, GEOCODING METHODS, AND ACCURACY ACHIEVED

Institution Designation	Federal or State Disclosure Statement	Geocoding Method	Percent Accuracy
Buffalo - 1	F	Manual by Loan Officer at Date of Closing	97
Buffalo - 2	S	Internal Automated Address Match Program	97
Buffalo - 3	S	Automated External Service Bureau	92
Buffalo - 4	F	Automated External Service Bureau	86
Buffalo - 5	S	Automated External Service Bureau	100
Buffalo - 6	S	Automated External Service Bureau	90
Buffalo - 7	S	Automated External Service Bureau	98
Buffalo - 8	F	Manual by Appraiser	84

2.3 AGGREGATION ACCURACY IN THE BUFFALO SMSA

Using procedures discussed in Chapter 1 and Appendices A and B, 15 census tracts were randomly selected for each of the 14 sampling units. As a result, 210 census tracts were selected from the 1977 Federal or state disclosure statements prepared by the eight institutions in the study.

An examiner from one of the four regulatory agencies extracted loan information for each selected census tract rom the institution's mortgage files or jackets and provided the information to the JRB study team. The study team used these data to recreate each census tract line. These results were compared against the census tract line in the institution's 1977 disclosure statements, and the number and amount of each type of error was determined.

As shown in Table 2.4, four of the eight institutions made errors in more than 50 percent of the census tract lines in the sample. The percentage of census tracts with no errors ranged from a low of 6.6 percent to high of 73.3 percent. The total number of aggregation errors in the sampled census tracts is shown in column (e). The total number of errors should be considered in light of the fact that, as shown in column (a) more than 15 census tracts were sampled for three of the institutions. The total number of errors made per sample of 15 census tracts range from a low of 7 errors to a high of 70 errors.

Table 2.5 shows the number of errors, the types of errors, and the dollar amount of the errors that were found in the 14 sampling units drawn from the eight institutions. A definition of each type of error is presented in Chapter 1. The total errors made in each sampling unit of 15 census tracts is shown in terms of the numbers of errors, the cumulative amount and the net amount. The cumulative amount of error is the sum of both over-reporting and under-reporting in the sampled census tract lines. The net amount of error was computed from the differences between the amount of over-reporting and under-reporting. The plus sign prefix to the net amount indicates over reporting in the sampled census racts and the negative sign prefix to the net amount indicates under-reporting. Over-reporting occurred in 9 of the 14 sampling units, and under-reporting occurred in 5 of the 14 sampling units.

SAMPLED INSTITUTIONS IN THE BUFFALO SMSA

INSTITUTION DESIGNATION	NUMBER OF SAMPLING UNITS	(a) NUMBER OF CENSUS TRACTS IN SAMPLE	(b) NUMBER OF CENSUS TRACTS WITH NO ERRORS	(c) PERCENTAGE OF CENSUS TRACTS WITH NO ERRORS	(d) NUMBER OF LOANS FOUND BY EXAMINERS IN SAMPLED CENSUS TRACTS	(e) TOTAL NUMBER OF AGGREGATION ERRORS IN SAMPLED CENSUS TRACTS
Buffalo - 1	1	15	8	53.3	163	40
Buffalo - 2	4	60	43	71.6	1,025	26
Buffalo - 3	3	45	17	37.7	549	70
Buffalo - 4	1	15	11	73.3	149	7
Buffalo - 5	1	15	1	6.6	134	27
Buffalo - 6	1	15	3	20.0	102	27
Buffalo - 7	1	15	4	26.6	151	32
Buffalo - 8	2	30	19	63.3	156	19

TABLE 2.5: NUMBER AND AMOUNT OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN BUFFALO SMSA

INSTITUTION DESIGNATION	SAMPLING UNIT	NUMBER AND AMOUNT ($1,000) OF EACH TYPE OF ERROR											TOTAL ERRORS		
		Assignment				Computation		Inappropriate Loan		Incorrect Non-Owner Occupied Designations		Incorrect Type of Loan Designations	(a) Number	(b) Cumulative Amount ($1,000)	(c) Net Amount ($1,000)
		Over Disclosed		Under Disclosed											
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number			
Buffalo - 1	1	11	181	24	242	1	5			4	114		40	542	- 180
Buffalo - 2	1	9	276	0	0	1	3					1	11	279	+ 273
Buffalo - 2	2	4	43	3	2,489								7	2,532	- 2,446
Buffalo - 2	3	1	34	2	38			2	37				5	109	+ 33
Buffalo - 2	4	1	23	0	0			2	75				3	98	+ 98
Buffalo - 3	1	13	373	8	219	4	75					1	26	667	+ 87
Buffalo - 3	2	8	49	1	58	2						1	12	107	- 9
Buffalo - 3	3	3	78	25	321	4							32	399	- 243
Buffalo - 4	1	5	28	0	0			2	54				7	82	+ 82
Buffalo - 5	1	10	311	3	163	10	18					4	27	492	+ 130
Buffalo - 6	1	5	99	9	181	2	18	7	209	4	68		27	575	+ 77
Buffalo - 7	1	20	542	4	113	8	139						32	794	+ 338
Buffalo - 8	1	6	126	1	27	3	25						10	178	+ 80
Buffalo - 8	2	3	75	2	88	2	42					2	9	205	- 55

TABLE 2.4: NUMBER OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN THE BUFFALO SMSA

INSTITUTION DESIGNATION	NUMBER OF SAMPLING UNITS	(a) NUMBER OF CENSUS TRACTS IN SAMPLE	(b) NUMBER OF CENSUS TRACTS WITH NO ERRORS	(c) PERCENTAGE OF CENSUS TRACTS WITH NO ERRORS	(d) NUMBER OF LOANS FOUND BY EXAMINERS IN SAMPLED CENSUS TRACTS	(e) TOTAL NUMBER OF AGGREGATION ERRORS IN SAMPLED CENSUS TRACTS
Buffalo - 1	1	15	8	53.3	163	40
Buffalo - 2	4	60	43	71.6	1,025	26
Buffalo - 3	3	45	17	37.7	549	70
Buffalo - 4	1	15	11	73.3	149	7
Buffalo - 5	1	15	1	6.6	134	27
Buffalo - 6	1	15	3	20.0	102	27
Buffalo - 7	1	15	4	26.6	151	32
Buffalo - 8	2	30	19	63.3	156	19

TABLE 2.5: NUMBER AND AMOUNT OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN BUFFALO SMSA

I #	SAMPLING UNIT	NUMBER AND AMOUNT ($1,000) OF EACH TYPE OF ERROR											TOTAL ERRORS		
		Assignment				Computation		Inappropriate Loan		Incorrect Non-Owner Occupied Designations		Incorrect Type of Loan Designations	(a) Number	(b) Cumulative Amount ($1,000)	(c) Net Amount ($1,000)
		Over Disclosed		Under Disclosed											
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number			
Buffalo - 1	1	11	181	24	242	1	5			4	114		40	542	- 180
Buffalo - 2	1	9	276	0	0	1	3					1	11	279	+ 273
Buffalo - 2	2	4	43	3	2,489								7	2,532	- 2,446
Buffalo - 2	3	1	34	2	38			2	37				5	109	+ 33
Buffalo - 2	4	1	23	0	0			2	75				3	98	+ 98
Buffalo - 3	1	13	373	8	219	4	75					1	26	667	+ 87
Buffalo - 3	2	8	49	1	58	2						1	12	107	- 9
Buffalo - 3	3	3	78	25	321	4							32	399	- 243
Buffalo - 4	1	5	28	0	0			2	54				7	82	+ 82
Buffalo - 5	1	10	311	3	163	10	18					4	27	492	+ 130
Buffalo - 6	1	5	99	9	181	2	18	7	209	4	68		27	575	+ 77
Buffalo - 7	1	20	542	4	113	8	139						32	794	+ 338
Buffalo - 8	1	6	126	1	27	3	25						10	178	+ 80
Buffalo - 8	2	3	75	2	88	2	42					2	9	205	- 55

TABLE 2.4: NUMBER OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN THE BUFFALO SMSA

INSTITUTION DESIGNATION	NUMBER OF SAMPLING UNITS	(a) NUMBER OF CENSUS TRACTS IN SAMPLE	(b) NUMBER OF CENSUS TRACTS WITH NO ERRORS	(c) PERCENTAGE OF CENSUS TRACTS WITH NO ERRORS	(d) NUMBER OF LOANS FOUND BY EXAMINERS IN SAMPLED CENSUS TRACTS	(e) TOTAL NUMBER OF AGGREGATION ERRORS IN SAMPLED CENSUS TRACTS
Buffalo - 1	1	15	8	53.3	163	40
Buffalo - 2	4	60	43	71.6	1,025	26
Buffalo - 3	3	45	17	37.7	549	70
Buffalo - 4	1	15	11	73.3	149	7
Buffalo - 5	1	15	1	6.6	134	27
Buffalo - 6	1	15	3	20.0	102	27
Buffalo - 7	1	15	4	26.6	151	32
Buffalo - 8	2	30	19	63.3	156	19

TABLE 2.5: NUMBER AND AMOUNT OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN BUFFALO SMSA

INSTITUTION DESIGNATION	SAMPLING UNIT	NUMBER AND AMOUNT ($1,000) OF EACH TYPE OF ERROR											TOTAL ERRORS		
		Assignment				Computation		Inappropriate Loan		Incorrect Non-Owner Occupied Designations		Incorrect Type of Loan Designations	(a) Number	(b) Cumulative Amount ($1,000)	(c) Net Amount ($1,000)
		Over Disclosed		Under Disclosed											
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number			
Buffalo - 1	1	11	181	24	242	1	5			4	114		40	542	- 180
Buffalo - 2	1	9	276	0	0	1	3					1	11	279	+ 273
Buffalo - 2	2	4	43	3	2,489								7	2,532	- 2,446
Buffalo - 2	3	1	34	2	38			2	37				5	109	+ 33
Buffalo - 2	4	1	23	0	0			2	75				3	98	+ 98
Buffalo - 3	1	13	373	8	219	4	75					1	26	667	+ 87
Buffalo - 3	2	8	49	1	58	2						1	12	107	- 9
Buffalo - 3	3	3	78	25	321	4							32	399	- 243
Buffalo - 4	1	5	28	0	0			2	54				7	82	+ 82
Buffalo - 5	1	10	311	3	163	10	18					4	27	492	+ 130
Buffalo - 6	1	5	99	9	181	2	18	7	209	4	68		27	575	+ 77
Buffalo - 7	1	20	542	4	113	8	139						32	794	+ 338
Buffalo - 8	1	6	126	1	27	3	25						10	178	+ 80
Buffalo - 8	2	3	75	2	88	2	42					2	9	205	- 55

Census tract assignment errors are the most significant problem in terms of both the number of errors and the dollar volume of errors. Such assignment errors occur when loans are either incorrectly aggregated into a census-tract line or incorrectly omitted from a census tract line. A total of [illegible] loans were over disclosed and 82 loans were under disclosed in the sampled census tracts. Given the relatively high degree of geocoding accuracy, these census tract assignment errors cannot be attributed to geocoding errors. Probably they occur because of inadequacies in the [illegible] procedures for selecting loans from files, transferring these data to [illegible], and aggregating the data into disclosure statements. Most of the census tract assignment errors were caused by over-or under-reporting 1-4 family residential mortgage or home improvement loans. The significant exception is the large census tract assignment error that [illegible] the [illegible] sampling unit of the institution designated as [illegible]. The error was caused by the failure of the institution to [illegible] a [illegible] million loan for a large multifamily garden apartment. [illegible] large error such as this, although rare, can potentially result in a high percentage error rate from the standpoint of the dollar amount; however, the percentage error rate from the standpoint of the number of errors per loans disclosed might be low. Except for the above exception and the [illegible] errors, the dollar amounts of nearly all other errors were for the full amount of a 1-4 family residential mortgage or home improvement loan.

Table 2.6 shows the results of the analysis of aggregation errors for the eight sampled institutions. The average number and amount of loans per census tract is shown in columns (e) and (c). For these institutions, the average number of loans per census tract ranged from approximately [illegible] to 13 loans, and the average amount of loans per census tract ranged from approximately $133,000 to $350,000. These two values provide a basis for assessing the significance of the number of errors and the amount of errors made by each institution on a per-tract basis.

TABLE 2.6: ANALYSIS OF AGGREGATION ERRORS FOR THE BUFFALO SMSA

INSTITUTION DESIGNATION	C'ml Bank(C) Savings Bank (B) S&L (S)	Federal(F) or State(S) Disclosure Statement	(a) Amount of Loans in 1977 Disclosure Statement ($1,000)	(b) Number of Loans in 1977 Disclosure Statement	(c) Number of Loans on 1977 Loan Roster	(d) Number of Census Tracts in 1977 Disclosure Statement	(e) Average Number of Loans per Census Tract (b÷d)	(f) Average Amount of Loans per Census Tract ($1,000)(a÷d)	Errors Per Sampled Census Tracts			Percentage Error Per Census Tract		Extrapolated Cum. Amount of Error for All Census Tracts (h×d) ($1,000)
									(g) Average No. of Errors (Table 2. e÷a)	(h) Average Cumulative amount of Error($1,000)	(i) Average Net Amount of Error($1000)	(j) Ave.No.Errors Ave. No. Loans (g÷e)	(k) Ave.Cum.Am't Errors Average Amount Loans (h÷f)	
Buffalo - 1	C	F	1,764	150	160	15 **	10.0	117.6	2.7	36.1	12.0	27.0	30.7	542
Buffalo - 2	B	S	75,206	3,168	3,865	215	14.7	349.8	0.4	50.3	47.5	2.7	14.4	10,815
Buffalo - 3	B	S	55,122	3,457 *	3,457	245	14.1	224.9	1.56	26.1	7.5	11.1	11.6	6,395
Buffalo - 4	S	F	27,834	1,119	1,202	144	7.8	193.3	0.5	5.5	5.5	6.4	2.8	792
Buffalo - 5	C	S	32,344	2,625	2,752	243	10.8	133.1	1.8	32.8	8.7	16.7	24.6	7,970
Buffalo - 6	B	S	39,191	1,557	2,501	203	7.7	193.1	1.8	38.3	5.1	23.4	19.8	7,774
Buffalo - 7	B	S	22,642	1,012	1,043	121	8.4	187.1	2.1	52.9	22.5	25.0	28.3	6,401
Buffalo - 8	S	F	28,568	970	966	189	5.1	151.2	.63	12.8	4.5	12.4	8.5	2,419

* Data obtained from Loan Roster
** 11 Census Tracts and 4 Zip Codes

The average [illegible] amount of errors made per census tract is [illegible] approximately. The average number of errors [illegible] and the average cumulative amount [illegible] approximately $5,000 to $53,000.

The [illegible] shown in column (j) and (k). The percentage [illegible] number of loans per census [illegible] and the percentage of the amount [illegible] ranged from 1.8 to [illegible] per-tract-error rates. [illegible] greater than [illegible] percent. [illegible] per-tract-error rates between [illegible] a per-tract-error rate [illegible] per-tract-error rate of [illegible] percent [illegible] a disclosure [illegible] that a per-tract-error [illegible] accuracy level of a disclosure statement [illegible] this basis and with the assumption that [illegible] accurately reflect the lending [illegible] disclosure statements, it is concluded [illegible] of four of the eight institutions are [illegible] disclosure statements of three of the eight [illegible] acceptable accuracy, and 1, the disclosure [illegible] is acceptable.

CHAPTER 3

SAN DIEGO

3.1 INTRODUCTION

Fifty-one depository institutions were required to prepare disclosure statements under Federal or state regulations in the San Diego Standard Metropolitan Statistical Area (SMSA) during 1977. Thirty-five of these institutions were required to prepare their disclosure statements under Regulation C, and sixteen institutions were required to prepare their disclosure statements under the State regulations. These 51 institutions included 24 commercial banks and 27 savings and loan associations.

The statistical sampling procedures discussed in Appendix A were used to select from among the 51 institutions 15 sampling units of 50 loans each for purposes of assessing the accuracy of geocoding at the SMSA level.

This sampling procedure resulted in the initial selection of ten depository institutions from which the 15 sampling units were to be drawn. Each selected institution was contacted by the appropriate regulatory agency and asked to participate in the study. Two of the original ten selected institutions declined to participate in the study. Both of these institutions were replaced by two randomly selected alternative institutions, and this resulted in a study sample of ten institutions and fifteen sampling units. Nine of the ten participating institutions were under the jurisdiction of the Federal Home Loan Bank Board, and [illegible] was under the jurisdiction of the Federal Deposit Insurance Corporation.

Data required to assess the accuracy with which institutions in the San Diego SMSA geocode property addresses to census tracts were collected and analyzed. The results of this analysis are presented in Section 3.2. A random sample of 15 census tracts was selected for each of the 15 sampling

units for purposes of assessing the accuracy with which the ten selected institutions aggregated the data in their disclosure statement. From this sample, the data needed to assess the accuracy of aggregation were collected and analyzed. The results of this analysis are presented in Section 3.3.

The number of loans on the disclosure statements of institutions selected in San Diego ranged from a low of 34 to a high of 10,096. The dollar amount of loans represented on disclosure statuments ranged from a low of $958,000 to a high of $638,929,000.

The statistical sampling procedures resulted in one sampling unit being drawn from seven of the ten institutions. Each of these sampling units consisted of 50 loans for geocoding analysis and 15 census tracts for aggregation analysis. The number of sampling units drawn from the other three institutions was two for San Diego-3 and San Diego-5, and three for San Diego-2.

3.2 GEOCODING ACCURACY IN THE SAN DIEGO SMSA

Using the procedures discussed in Chapter 1 and Appendices A and B of this report, 50 loans were randomly selected for each of the 15 sampling units. The loans were selected from the 1977 loan roster provided by each of the ten sampled depository institutions in San Diego. The property address for each selected loan in the loan roster was regeocoded to its appropriate census tract using SIMS' Census Tract Address Coding Guide (ACG) and Thomas Brothers Maps published for the San Diego SMSA.

The ACG used in the regeocoding effort contains address information as of September 1, 1975, and it does not include property addresses that were established after that date. The 1978 edition of Thomas Brothers Maps was used to locate the census tract assignments that could not be located in the ACG. However, some of the property addresses that were selected for regeocoding were not included in either of these geocoding tools. These addresses were eliminated from consideration and only those property addresses included in the ACG were regeocoded and considered in the calculation of the institution's percentage of geocoding accuracy.

Once the property addresses for each sampling unit were regeocoded to the appropriate census tract, these results were compared with the geocoding assignments made by the institution. When discrepancy occurred between the two assignments, the property address was regeocoded a second time. Discrepancies which remained were considered to be an incorrect assignment by the institution.

Table 3.1 shows the geocoding accuracy findings for the ten institutions and fifteen sampling units studied in San Diego. The percentage of accuracy ranged from a low of 78 percent to a high of 100 percent. The geocoding accuracy was 90 percent or greater in 12 of the 15 sampling units.

Using the data in Table 3.1 and the statistical procedures discussed in Appendix A (See page 10, paragraph 3), a statistical estimate was made of the geocoding accuracy of all 51 institutions subject to reporting in the San Diego SMSA. These results in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval are shown in Table 3.2.

TABLE 3.2: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE SAN DIEGO SMSA

Item	Value
Number of Sampling Units	15
Mean Percentage of Accuracy	92.05 %
Standard Percentage of Error	1.49%
95 Percent Confidence Interval	89.31% to 94.97%

units for purposes of assessing the accuracy with which the ten selected institutions aggregated the data in their disclosure statement. From this sample, the data needed to assess the accuracy of aggregation were collected and analyzed. The results of this analysis are presented in Section 3.3.

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Once the property addresses for each sampling unit were regeocoded to the appropriate census tract these results were compared with the geocoding assignments made by the institution. When a discrepancy occurred between the two assignments, the property address was regeocoded a second time. Discrepancies which remained were considered to be an incorrect assignment by the institution.

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The ACG used in the regeocoding effort contains address information as of September 1, 1975, and it does not include property addresses that were established after that date. The 1978 edition of Thomas Brothers Maps was used to locate the census tract assignments that could not be located in the ACG. However some of the property addresses that were selected for regeocoding were not included in either of these geocoding tools. These addresses were eliminated from consideration, and only those property addresses included in the ACG were regeocoded and considered in the calculation of the institution's percentage of geocoding accuracy.

Once the property addresses for each sampling unit were regeocoded to the appropriate census tract these results were compared with the geocoding assignments made by the institution. When a discrepancy occurred between the two assignments, the property address was regeocoded a second time. Discrepancies which remained were considered to be an incorrect assignment by the institution.

Table 3.1 shows the geocoding accuracy findings for the ten institutions and fifteen sampling units studied in San Diego. The percentage of accuracy ranged from a low of 78 percent to a high of 100 percent. The gaocoding accuracy was 90 percent or greater in 12 of the 15 sampling units.

Using the data in Table 3.1 and the statistical procedures discussed in Appendix A (See page 10, parngraph 3), a statistical estimate was made of the geocoding accuracy of all 51 institutions subject to reporting in the San Diego SMSA. These results in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval are shown in Table 3.2.

TABLE 3.2: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE SAN DIEGO SMSA

Item	Value
Number of Sampling Units	15
Mean Percentage of Accuracy	92.05 %
Standard Percentage of Error	1.49%
95 Percent Confidence Interval	89.31% to 94.97%

TABLE 3.1: GEOCODING ACCURACY RESULTS FOR SAN DIEGO

INSTITUTION DESIGNATION	SAMPLING UNIT	Addresses Not Found		Incorrect Assignments		Correct Assignments	
		Number	Percent	Number	Percent	Number	Percent
San Diego - 1	1	2	4	5	10	43	90
San Diego - 1	2	1	2	4	8	45	92
San Diego - 2	3	0	0	3	6	47	94
San Diego - 2	4	0	0	0	0	50	100
San Diego - 2	5	0	0	3	6	46	94
San Diego - 3	6	0	0	3	6	47	94
San Diego - 3	7	0	0	1	2	49	98
San Diego - 4	8	2	4	3	6	45	94
San Diego - 5	9	0	0	4	8	46	92
San Diego - 5	10	0	0	11	22	39	78
San Diego - 6	11	1	2	5	10	44	90
San Diago - 7	12	5	10	6	13	39	87
San Diego - 8	13	2	4	7	15	41	85
San Diego - 9	14	0	0	1	2	49	98
San Diego - 10	15	3	6	1	2	43	98

The mean percentage of geocoding accuracy for the 15 sampling units is 92.05 percent, and the standard error--at the 95 percent confidence level--is 1. 9. Thus, it can be stated with 95 percent confidence, that the accuracy with which the 51 institutions in the San Diego SMSA geocoded their property addresses to census tracts for use in 1977 disclosure statement of the San Diego SMSA lies between 89.13 and 94.97 percent. Stated another way, there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 89.13 and 94.97 percent.

The relatively high degree of geocoding accuracy within the San Diego SMSA is greatly influenced by the availability and proper use of a reliable and up-to-date manual geocoding tool, Thomas Brothers Maps.[4] As shown in Table 3.3, all ten sampled institutions used this publication.

3.3 AGGREGATION ACCURACY IN THE SAN DIEGO SMSA

Using procedures discussed in Chapter and Appendices A and B, 15 census tracts were randomly selected for each of the 15 sampling units. As a result 225 census tracts were selected from the 1977 Federal or state disclosure statements prepared by the ten institutions in San Diego participating in the study.

An examiner from one of the two regulatory agencies extracted loan information for each selected census tract from the institution's mortgage files or jackets and provided the information to the JRB study team. The study team used these data to recreate each census tract line. These results were compared against the census tract line in the institution's 1977 disclosure statement, and the number and amount of each type of aggregation error was determined.

As shown in Table 3.4, column (c), six of the ten institutions made errors in more than 50 percent of the census tract lines in the sample. The percentage of census tracts with no errors ranged from a low of zero percent to a high of 76.7 percent. The total number of aggregation errors in the sampled census tracts is shown in column (e). The total number

TABLE 3.3: COMPARISON OF TYPE OF DISCLOSURE STATEMENT, GEOCODING METHODS, AND ACCURACY ACHIEVED

Institution Designation	Federal(F) or State (S)	Geocoding Method	Percent Accuracy
San Diego - 1	F	Manual Using SIMS ACGs & TBM	91
San Diego - 2	F	Manual Using TBM	96
San Diego - 3	S	Manual Using TBM	96
San Diego - 4	S	Manual Using TBM	94
San Diego - 5	S	Manual Using TBM	85
San Diego - 6	S	Manual Using TBM	90
San Diego - 7	F	Manual Using TBM	87
San Diego - 8	F	Manual Using TBM	85
San Diego - 9	S	Manual Using TBM	98
San Diego - 10	F	Manual Using TBM & CTM	98

NOTE: SIMS AGC is Savings Institution Management Sciences, Inc.
TBM is Thomas Brothers Maps
CTM is the Ph 1 Series Published by the Bureau of Census

INSTITUTION DESIGNATION	NUMBER OF SAMPLING UNITS	(a) NUMBER OF CENSUS TRACTS IN SAMPLE	(b) NUMBER OF CENSUS TRACTS WITH NO ERRORS	(c) PERCENTAGE OF CENSUS TRACTS WITH NO ERRORS	(d) NUMBER OF LOANS FOUND BY EXAMINERS IN SAMPLED CENSUS TRACTS	(e) TOTAL NUMBER OF AGGREGATION ERRORS IN SAMPLED CENSUS TRACTS
San Diego - 1	2	30	11	43.2	311	140
San Diego - 2	3	45	4	8.8	457	106
San Diego - 3	2	30	23	76.7	100	19
San Diego - 4	1	15	9	60.0	179	13
San Diego - 5	2	30	1	6.7	846	136
San Diego - 6	1	15	2	13.3	303	42
San Diego - 7	1	15	0	0.0	164	78
San Diego - 8	1	15	9	60.0	245	16
San Diego - 9	1	15	6	40.0	95	21
San Diego - 10	1	15	8	53.3	37	14

of errors should be considered in light of the fact that, as shown in column (a), more than 15 census tracts were sampled for four of the institutions. The total number of errors made per sample of 15 census tracts range from a low of 10 errors to a high of 140 errors.

Table 3.5 shows the number of errors, the types of errors, and the dollar amount of the errors that were found in the 15 sampling units drawn from the ten institutions in San Diego. A definition of each type of error is presented in Chapter 1. The total errors made in each sampling unit of 15 census racts is shown in terms of the number of errors the cumulative amount and the net amount. The cumulative amount of error is the sum of both over-reporting and under-reporting in the sampled census tract lines. The net amount of error was computed from the differences between the amount of over-reporting and under-reporting. The plus sign prefix to the net amount indicates over-reporting in the sampled census tracts and the minus sign prefix to the net amount indicates under-reporting. Over-reporting occurred in 14 of the 15 sampling units, and under-reporting occurred in 9 of the 15 sampling units.

Census tract assignment errors are a significant problem in terms of both the number of errors and the dollar volume of errors. Such assignment errors occur when loans are either incorrectly aggregated into a census tract line or incorrectly omitted from a census tract line. A total of 217 loans were over-disclosed and 81 loans were under-disclosed in the sampled census tracts. Given the relatively high degree of geocoding accuracy, these census tract assignment errors cannot be attributed to geocoding itself. Instead, they occur because of inadequacies in the institution's procedures for selecting loans from files, ransferring these data to other files, and aggregating the data into the disclosure statement.

A second major problem is the inclusion of inappropriate loans in the disclosure statement. The most significant problem is the inclusion of short term construction loans. Numerous instances were found where institutions included large short term condominium construction loans in excess of $1 million in their disclosure statements. These were frequently included in both the nonowner occupant column and in the conventional 1-4 family

TABLE 3.5: NUMBER AND AMOUNT OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN THE SAN DIEGO SMSA

INSTITUTION DESIGNATION	SAMPLING UNIT	NUMBER AND AMOUNT ($1,000) OF EACH TYPE OF ERROR											TOTAL ERRORS		
		Assignment				Computation		Inappropriate Loan		Incorrect Non-Owner Occupied Designations		Incorrect Type of Loan Designations	(a) Number	(b) Cumulative Amount ($1,000)	(c) Net Amount ($1,000)
		Over Disclosed		Under Disclosed											
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number			
San Diego - 1	1	68	2,517	31	1,338	2	5	9	4,115	1	33		111	8,008	+ 6,668
San Diego - 1	2	13	1,470	8	474	1	5	1	850	5	37	1	29	2,836	+ 1,814
San Diego - 2	1			5	1,124	12	1,819	1	226	17	579		35	3,748	- 3,038
San Diego - 2	2	8	832	7	899	10	435	1	26	13	1,309		39	3,501	+ 645
San Diego - 2	3	3	259	5	1,125	10	534	5	1,485	9	1,568		32	4,971	+ 1,515
San Diego - 3	1	3	294										3	294	+ 294
San Diego - 3	2	9	411					2	77	5	321		16	809	+ 569
San Diego - 4	1	2	58	1	53					10	436		13	547	- 49
San Diego - 5	1	32	1,222	11	1,772	10	47	8	11,134	7	348	1	68	14,523	+ 10,969
San Diego - 5	2	28	1,672	12	353	6	20	7	4,955	13	506	2	68	7,506	+ 6,762
San Diego - 6	1	11	336					2	59	29	1,204		42	1,599	- 93
San Diego - 7	1	20	1,042			9	239			48	2,771	1	78	4,052	+ 3,014
San Diego - 8	1	7	359	1	325					8	315		16	999	+ 349
San Diego - 9	1	12	560					4	216	5	226		21	1,002	- 698
San Diego - 10	1	1	15					3	140	10	366		14	521	- 211

loan column. Thus, a loan that should not be included at all is included twice in a census ract line. The institution designated San Diego-5, for example, included 15 inappropriate loans totaling over $16 million in the 30 census tract lines examined in the sample. The majority of these were short term condominium construction loans. Although these loans were included twice in census tract line, for purposes of this analysis, each occurance was treated as a single error in the amount of the loan.

Business loans and mortgage loans that were refinanced for purposes other than for the purchase or improvement of residential property were also included in a few of the disclosure statements, and these were treated as inappropriate loans in the analysis.

A large number of errors were made in conjunction with loans for nonoccupant dwellings. Such errors were made by the inclusion of loans for multifamily dwellings in this column, failure to list nonoccupant loans in the other columns and failure to list nonoccupant loans in the nonoccupant column. These errors were compounded by including inappropriate short-term construction loans in the nonoccupant column.

Table 3.6 shows the results of the analysis of aggregation errors for the ten sampled institutions. The average number and amount of loans per census tract is shown in columns (e) and (f). For these institutions, the average number of loans per census tract ranged from approximately 1.8 to 29.8 loans, and the average amount of loans per census ract ranged from approximately $50,000 to $1,884,000. These two values provide a basis for assessing the significance of the number of errors and the amount of errors made by each institution on a per-tract basis.

The average number and amount of errors made per census tract is shown in column (g) and (h), respectively. The average number of errors per census tract ranged from .63 to 5.2, and the average cumulative amount of error per census tract ranged from approximately $34,700 to $734,300.

TABLE 3.6: ANALYSIS OF AGGREGATION ERRORS FOR THE SAN DIEGO SMSA

INSTITUTION DESIGNATION	C'ml Bank(C) Savings Bank (B) S&L (S)	Federal(F) or State(S) Disclosure Statement	(a) Amount of Loans in 1977 Disclosure Statement ($1,000)	(b) Number of Loans in 1977 Disclosure Statement	(c) Number of Loans on 1977 Loan Roster	(d) Number of Census Tracts in 1977 Disclosure Statement	(e) Average Number of Loans per Census Tract (b÷d)	(f) Average Amount of Loans per Census Tract ($1,000) (a÷d)	Errors Per Sampled Census Tracts (g) Average No. of Errors (Table 3.4 e÷a)	Errors Per Sampled Census Tracts (h) Average Cumulative Amount of Error ($1,000)	Errors Per Sampled Census Tracts (i) Average Net Amount of Error ($1000)	Percentage Error Per Census Tract (j) Ave.No.Errors / Ave.No.Loans (g÷e)	Percentage Error Per Census Tract (k) Ave.Cum.Am't Errors / Average Amount Loans (h÷f)	Extrapolated Cum. Amount of Error for All Census Tracts (h×d) ($1,000)
San Diego-1	S	F	328,884	6,295	4,367	324	19.4	1,015.1	4.7	361.5	282.7	24.2	35.6	117,126
San Diego-2	B	F	116,553	3,385	2,891	310	10.9	376.0	2.4	271.6	115.5	22.0	72.2	84,196
San Diego-3	B	S	107,930	1,777	1,419	215	8.3	502.0	0.63	36.8	28.8	7.6	7.3	7,912
San Diego-4	S	S	124,648	1,988	2,006	252	7.9	494.6	0.87	36.5	3.3	11.0	7.4	9,198
San Diego-5	S	F	638,929	10,096	8,384	339	29.8	1,884.7	4.5	734.3	591.0	15.1	39.0	248,928
San Diego-6	S	S	38,090	853	804	52	16.4	732.5	2.8	106.6	6.2	17.1	14.6	5,543
San Diego-7	S	F	97,144	1,980	1,980	295	6.7	329.3	5.2	270.1	200.9	77.6	82.0	79,680
San Diego-8	S	S	154,924	2,520	2,520	225	11.2	688.6	1.1	66.6	23.3	9.8	9.7	14,985
San Diego-9	B	S	174,620	3,347	3,430	283	11.8	617.0	1.4	66.8	46.5	11.9	10.8	18,904
San Diego-10	C	F	958	34	47	19	1.8	50.4	0.93	34.7	14.1	51.7	68.8	659

The error rate per census tract is shown in columns (j) and (k). The percentage of the number of errors to the number of loans per census tract ranged from 7.6 to 77.6 percent, and the percentage of the amount of errors to the amount of loans per census tract ranged from 7.3 to 82.0 percent. Five of the ten institutions incurred per-tract-error rates, in either the number or dollar amounts of loans, of greater than 20 percent, and three of the ten institutions incurred per-tract-error rates between 10 and 20 percent. Only two institutions incurred a per-tract-error rate of less than 10 percent. It is felt that a per-tract-error rate of 20 percent or more in either the number or dollar amount of loans renders a disclosure statement unacceptably inaccurate. It is also felt a per-tract-error rate between 10 and 20 percent renders the accuracy level of a disclosure statement to be only marginally acceptable. On this basis, and with the assumption that the data extracted by the regulatory examiners accurately reflect the loan data that should have been reported on the disclosure statements, it is concluded that: 1) the disclosure statements of five of the ten institutions are of unacceptable accuracy, 2) the disclosure statements of three of the ten institutions are of marginally acceptable accuracy, and 3) the disclosure statement of two institutions are acceptable.

CHAPTER 4

CHICAGO

4.1 INTRODUCTION

Four hundred and fifty-two institutions that were required to prepare disclosure statements under Federal or state regulations in the Chicago Standard Metropolitan Statistical Area (SMSA) during 197 were considered in the study. At the start of 1977 these institutions were required to prepare their disclosure statements under either Regulation or the Illinois Financial Institutions Disclosure Act. During 1977 however, the State Act was ruled unconstitutional by the Illinois State Supreme Court, and subsequently all institutions are required to file under Regulation C. These 452 institutions included 291 commercial banks, and 161 savings and loan associations.

The statistical sampling procedures discussed in Chapter 1 and Appendices A and B were revised slightly to select the 30 sampling units of 50 loans each for purposes of assessing the accuracy of geocoding at the SMSA level. Because of the large number of financial institutions in the Chicago SMSA population and the uncertainty deriving from the actions of the Illinois State Supreme Court and the Federal Reserve Board during the study period, the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation experienced considerable difficulty in obtaining data on the number of mortgages originated during 1977 by each of the 452 financial institutions Under the sample procedures outlined in Appendix B, these data were necessary to enable JRB to rank the population prior to randomly selecting the study sample. Following a series of discussions with representatives of the regulatory agencies, the decision was made to determine the number of loans from data generated by the Phase I HMDA Study Contractor processing the 1977 disclosure statements prepared by depository institutions in the Chicago SMSA.

This sampling procedure resulted in the initial selection of 26 depository institutions from which the 30 sampling units were to be drawn. Each selected institution was contacted by the appropriate regulatory agency and asked to participate in the study. Two of the original 26 selected institutions declined to participate in the study. These two institutions were replaced by two randomly selected alternate institutions. The 26 institutions which participated in the Accuracy audit were under the jurisdiction of four different regulatory agencies:

Regulatory Agency	Number of Institutions
Federal Home Loan Bank Board	13
Federal Deposit Insurance Corporation	7
Board of Governors Federal Reserve System	5
Office of the Comptroller of the Currency	1

The number of loans on the disclosure statements of institutions selected in Chicago ranged from a low of 50 to a high of 13,871. The total dollar amount of loans represented on disclosure statements ranged from a low of $980,000 to a high of $545,903,000.

The statistical sampling procedures resulted in one sampling unit being drawn from 22 of the 26 institutions. Each of these sample units consisted of 50 loans for geocoding analysis and 15 census tracts for aggregation analysis. The number of sampling units drawn from the other four institutions was two.

Data required to assess the accuracy with which institutions in the Chicago SMSA geocode property addresses to census tracts were collected and analyzed. The results of this analysis are presented in Section 4.2.

A random sample of 15 census tracts was selected for each of the 30 sampling units for purposes of assessing the accuracy with which the 26 selected institutions aggregated the data in their disclosure statement. From this sample, the data needed to assess the accuracy of aggregation were collected and analyzed. The results of this analysis are presented in Section 4.3.

4.2 GEOCODING ACCURACY IN THE CHICAGO SMSA

Using the procedures discussed in Chapter 1 and Appendices A and B of this report, 50 loans were randomly selected for each of the 30 sampling units. The loans were selected from the 1977 loan roster provided by each of the 26 depository institutions. The property address for each selected loan in the loan roster was regeocoded to its appropriate census tract using the Census Tract Address Coding Guide (ACG).

The ACG used in the regeocoding effort contains address information as of September 1, 1975, and it does not include property addresses that were established after that date. Consequently some of the property addresses that were selected for regeocoding were not included in the ACG. These addresses were eliminated from consideration, and only these property addresses included in the ACG were regeocoded and considered in the calculation of the institution's percentage of geocoding accuracy.

Once the property addresses for each sampling unit were regeocoded to the appropriate census tract these results were compared with the geocoding assignments made by the institution. When a discrepancy occurred between the two assignments, the property address was regeocoded a second time. Discrepancies which remained were considered to be an incorrect assignment by the institution.

Table 4.1 shows the geocoding accuracy findings for the 26 institutions and 30 sampling units. The percentage of accuracy for the sampling units ranged from a low of 38 percent to a high of 100 percent. The geocoding accuracy was 90 percent or greater in 15 of the 30 sampling units. Conversely, the geocoding accuracy was less than 80 percent in 10 of the 30 sampling units.

Using the data in Table 4.1 and the statistical procedures discussed in Appendix A (See page 10, paragraph 3), a statistical estimate was made of the geocoding accuracy of all 452 institutions in the Chicago SMSA.

These results in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval are shown in Table 4.2.

TABLE 4.2: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE CHICAGO SMSA

Item	Value
Number of Sampling Units	30
Mean Percentage of Accuracy	82.27%
Standard Percentage of Error	3.11%
95 Percent Confidence Interval	76.17% to 88.37%

The mean percentage of geocoding accuracy for the 30 sampling units is 82.27 percent, and the standard error, at the 95 percent confidence level, is 3.11 percent. Thus, it can be stated with 95 percent confidence that the accuracy with which the 452 institutions in the Chicago SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement lies between 76.17 and 88.3 percent. Stated another way, there is 95 percent probability that the geocoding accuracy level of any one institution in the Chicago SMSA will fall between 76.17 and 88.3 percent.

The accuracy with which depository institutions in Chicago geocode addresses to census tracts is much lower than in either the Buffalo or San Diego SMSAs. Table 4. shows the geocoding methods used and the percentage of geocoding accuracy for each institution. A greater variety of tools are used in the Chicago SMSA, and these include the SIMS ACG, the Dun and Bradstreet BANCODE Census Coding Directory,[5] city maps, and the census tract maps published by the Bureau of the Census.[6]

TABLE 4.1: GEOCODING ACCURACY RESULTS FOR CHICAGO

INSTITUTION DESIGNATION	SAMPLING UNIT	Addresses Not Found		Incorrect Assignments		Correct Assignments	
		Number	Percent	Number	Percent	Number	Percent
Chicago - 1	1	6	12	2	5	42	95
Chicago - 2	2	5	10	3	6	42	94
Chicago - 3	3	26	52	9	38	15	62
Chicago - 4	4	8	16	0	0	42	100
Chicago - 5	5	8	16	3	7	39	93
Chicago - 6	6	7	14	14	33	29	66
Chicago - 7	7	32	64	4	22	14	78
Chicago - 8	8	14	28	11	31	25	69
Chicago - 9	9	13	26	15	41	22	59
Chicago - 10	10	7	14	1	2	42	98
Chicago - 11	11	5	10	5	11	40	89
Chicago - 12	12	24	48	2	8	24	92
Chicago - 13	13	75	10	1	2	44	98
Chicago - 14	14	3	6	22	47	25	53
Chicago - 15	15	8	16	26	62	16	38
Chicago - 15	16	7	14	23	53	20	47

TABLE 4.1: GEOCODING ACCURACY RESULTS FOR CHICAGO (Continued)

INSTITUTION DESIGNATION	SAMPLING UNIT	Addresses Not Found		Incorrect Assignments		Correct Assignments	
		Number	Percent	Number	Percent	Number	Percent
Chicago - 16	17	6	12	7	16	37	84
Chicago - 17	18	11	22	0	0	39	100
Chicago - 18	19	5	10	4	9	41	91
Chicago - 18	20	5	10	3	7	42	93
Chicago - 19	21	13	26	9	25	28	75
Chicago - 20	22	1	2	5	10	44	90
Chicago - 21	23	14	28	14	39	22	61
Chicago - 22	24	17	34	3	9	29	91
Chicago - 23	25	25	50	2	8	23	92
Chicago - 23	26	24	48	3	12	23	88
Chicago - 24	27	16	32	4	12	30	88
Chicago - 24	28	15	30	3	9	32	91
Chicago - 25	29	4	8	2	4	44	96
Chicago - 26	30	34	18	1	6	15	94

TABLE 4.3: COMPARISON OF TYPE OF DISCLOSURE STATEMENT, GEOCODING METHODS, AND ACCURACY ACHIEVED

Institution Designation	Federal (F) or State (S)	Geocoding Method	Percent Accuracy
Chicago - 1	F	Manual Using CTM & SIMS ACG	95
Chicago - 2	F	Manual Using CTM & SIMS ACG	94
Chicago - 3	F	Manual Using CTM	62
Chicago - 4	F	Automated & Manual Using SIMS ACG	100
Chicago - 5	F	Manual Using CTM, SIMS ACG, D&B	93
Chicago - 6	F	Manual Using SIMS ACG	66
Chicago - 7	S	Manual Using CTM	78
Chicago - 8	S	Manual by External Appraisal Service	69
Chicago - 9	F	Manual Using CTM	59
Chicago - 10	F	Automated Service Bureau & Manual SIMS ACG	98
Chicago - 11	F	Manual Using SIMS ACG	89
Chicago - 12	F	Manual Using CTM & SIMS ACG	92
Chicago - 13	F	Manual Using CTM & SIMS ACG	98
Chicago - 14	S	Manual Using CTM & D&B	53
Chicago - 15	S	Manual Using CTM	42.5
Chicago - 16	F	Manual Using CTM	84
Chicago - 17	S	Manual Using CTM & SIMS ACG	100
Chicago - 18	S	Manual Using D&B	92
Chicago - 19	S	Manual Using CTM & Street Map	72
Chicago - 20	S	Manual Using CTM & D&B	90
Chicago - 21	S	Manual Using Chicago Map	61
Chicago - 22	S	Manual Using CTM & SIMS ACG	91
Chicago - 23	F	Automated Using Ad-Match & Manual for Non-Match	90
Chicago - 24	F	Manual Using CTM & D&B	89.5
Chicago - 25	S	Manual Using D&B	96
Chicago - 26	F	Manual Using CTM & SIMS ACG	94

NOTE: D&B is Dun & Bradstreet BANCODE Census Coding Directory
Chicago Map used by Chicago - 21 is Chicago Association of Industry and Commerce
CTM is the PH 1 Series published by Bureau of Census
SIMS ACG is Savings Institution Management Sciences, Inc., Address Coding Guide

Seven institutions rely solely on census tract maps or other maps, and these institutions achieved lower levels of accuracy than did the other institutions. The accuracy levels achieved by these seven institutions ranged from low of 42.5 percent to a high of 84 percent. Four of the seven achieved accuracy levels less than 70 percent. Maps, by themselves, are not adequate for accurate geocoding. Sole reliance on maps for geocoding will lead to substantial levels of geocoding inaccuracy, particularly in the more densely populated urban areas where individual census tracts occupy small geographical areas.

The results show conclusively that geocoding can be performed accurately, if the currently available address coding guides are obtained and used properly and if the census tract numbers assigned to addresses are accurately recorded and maintained on files. Eight of the nine institutions using the SIMS ACG achieved accuracy levels greater than 90 percent. The ninth institution achieved an accuracy level of 66 percent. All three institutions using automated address-matching techniques supplemented by the manual use of address coding guides achieved accuracy levels of 90 percent or better. Five of the six institutions using the Dun and Bradstreet BANCODE Census Coding Directory achieved accuracy levels of 90 percent or better. The sixth achieved an accuracy level of 53 percent.

Thus, the institutions achieving poor geocoding accuracy levels fall into two categories 1) those relying solely on census tract maps or other maps and 2) those few institutions who are either not using address coding guides properly or who are not accurately recording and maintaining the results of the census tract assignments.

4.3 AGGREGATION ACCURACY IN THE CHICAGO

Using procedures discussed in Chapter 1 and Appendices A and B, 15 census tracts were randomly selected for each of 29 sampling units used in the aggregation analysis. As a resul 43 census tracts were selected from the 1977 Federal or state disclosure statements prepared by the 25 institutions sampled in the aggregation portion of the study. Data on aggregation were not available for one institution, thereby explaining the presence of 25 rather than 26 institutions in the aggregation portion of the study.

An examiner from one of the four regulatory agencies extracted loan information for each selected census tract from the institution's mortgage files or jackets and provided the information to the JRB study team. The study team used these data to recreate each census tract line. These results were compared against the census tract line in the institution's 1977 Federal or state disclosure statement, and the number and amount of each type of error was determined.

As shown in Table 4.4, 18 of 25 institutions made errors in more than 50 percent of the census tract lines in the sample. The percentage of census tracts with no errors in the 25 sampled institutions ranged from a low of zero percent to a high of 73.3 percent. The total number of aggregation errors in the sampled census tracts is shown in column (e). The total number of errors should be considered in light of the fact that, as shown in column (a), more than 15 census tracts were sampled for three of the institutions. The total number of errors made per sample of 15 census tracts ranged from a low of 5 errors to a high of 736 errors.

Table 4.5 shows the number of errors, the types of errors, and the dollar amount of the errors that were found in the 29 sampling units drawn from the 25 institutions in Chicago. A definition of each type of error is presented in Chapter 1. The total errors made in each sampling unit of 15 census tracts is shown in terms of the number of errors, the cumulative amount and the net amount. The cumulative amount of error is the sum of both over-reporting and under-reporting in the sampled census tract lines. The net amount of error was computed from the differences between the amount of over-reporting and under-reporting. The plus sign prefix to the net amount indicates over-reporting in the sampled census tracts and the minus sign prefix to the net amount indicates under-reporting. Over-reporting occurred in 22 of the 29 sampling units, and under-reporting occurred in 7 of the 29 sampling units.

TABLE 4.4: NUMBER OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN THE CHICAGO SMSA

INSTITUTION DESIGNATION	NUMBER OF SAMPLING UNITS	(a) NUMBER OF CENSUS TRACTS IN SAMPLE	(b) NUMBER OF CENSUS TRACTS WITH NO ERRORS	(c) PERCENTAGE OF CENSUS TRACTS WITH NO ERRORS	(d) NUMBER OF LOANS FOUND BY EXAMINERS IN SAMPLED CENSUS TRACTS	(e) TOTAL NUMBER OF AGGREGATION ERRORS IN SAMPLED CENSUS TRACTS
Chicago - 1	1	15	7	46.7	51	17
Chicago - 2	1	15	11	73.3	52	5
Chicago - 3	1	15	6	40.4	47	33
Chicago - 4	1	15	5	33.3	85	23
Chicago - 5	1	15	0	0.0	44	178
Chicago - 6	1	15	1	6.7	17	29
Chicago - 7	1	15	0	0.0	65	736
Chicago - 8	1			NO DATA		
Chicago - 9	1	15	3	20.0	60	48
Chicago - 10	1	15	7	46.7	36	10
Chicago - 11	1	15	4	26.6	163	24
Chicago - 12	1	15	6	40.4	54	31
Chicago - 13	1	15	11	73.3	18	5
Chicago - 14	1	15	3	20.2	42	25
Chicago - 15	2	30	0	0.0	74	593

TABLE 4.4: NUMBER OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN THE CHICAGO SMSA (Continued)

INSTITUTION DESIGNATION	NUMBER OF SAMPLING UNITS	(a) NUMBER OF CENSUS TRACTS IN SAMPLE	(b) NUMBER OF CENSUS TRACTS WITH NO ERRORS	(c) PERCENTAGE OF CENSUS TRACTS WITH NO ERRORS	(d) NUMBER OF LOANS FOUND BY EXAMINERS IN SAMPLED CENSUS TRACTS	(e) TOTAL NUMBER OF AGGREGATION ERRORS IN SAMPLED CENSUS TRACTS
Chicago - 16	1	15	10	66.6	47	12
Chicago - 17	1	15*	11	73.3	23 *	5
Chicago - 18	2	30	6	40.4	115	68
Chicago - 19	1	15	7	46.7	18	13
Chicago - 20	1	15	5	33.3	179	19
Chicago - 21	1	15	0	0.0	19	108
Chicago - 22	1	15	11	73.3	17	5
Chicago - 23	2	30	18	60.0	365	273
Chicago - 24	2	30	4	13.3	24	252
Chicago - 25	1	15	8	53.3	55	8
Chicago - 26	1	15	0	0.0	543	436

*Data based on 6 months State Disclosure Statement.

TABLE 4.5: NUMBER AND AMOUNT OF AGGREGATION ERRORS FOR SAMPLED INSTITUTIONS IN CHICAGO SMSA

INSTITUTION DESIGNATION	SAMPLING UNIT	NUMBER AND AMOUNT ($1,000) OF EACH TYPE OF ERROR											TOTAL ERRORS		
		Assignment				Computation		Inappropriate Loan		Incorrect Non-Owner Occupied Designations		Incorrect Type of Loan Designations	(a) Number	(b) Cumulative Amount ($1,000)	(c) Net Amount ($1,000)
		Over Disclosed		Under Disclosed											
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number			
Chicago - 1	1	11	436	4	138	1	6	1	16				17	596	+ 320
Chicago - 2	1	3	115	0	0			2	59				5	174	+ 174
Chicago - 3	1	15	431	13	286			2	120	3	81		33	918	- 346
Chicago - 4	1	4	151	3	115					16	571		23	837	+ 599
Chicago - 5	1	176	3,344	1	5	1	3						178	3,352	+ 3,336
Chicago - 6	1	20	629	8	121							1	29	750	+ 508
Chicago - 7	1	736	12,803	0	0								736	12,803	+12,803
Chicago - 8	1	----------	----------	----------	---- NO	DATA ----	----------	----------	----------	----------	----------	----------	----------	----------	----------
Chicago - 9	1	36	1,012	5	153	1		2	41	4	215		48	1,421	+ 685
Chicago - 10	1	7	434	1	64	2	9						10	507	+ 379
Chicago - 11	1	9	331	2	38	4	14			9	264		24	647	+ 179
Chicago - 12	1	22	995	4	156	3	6	1	40	1	25		31	1,222	+ 848
Chicago - 13	1	2	24	1	9			1	5			1	5	38	+ 20
Chicago - 14	1	14	75	9	50	2	6						25	131	+ 25
Chicago - 15	1	87	2,291	0	0	1	2	1	106				89	2,399	+ 2,399

INSTITUTION DESIGNATION	SAMPLING UNIT	NUMBER AND AMOUNT ($1,000) OF EACH TYPE OF ERROR											TOTAL ERRORS		
		Assignment				Computation		Inappropriate Loan		Incorrect Non-Owner Occupied Designations		Incorrect Type of Loan Designations	(a) Number	(b) Cumulative Amount ($1,000)	(c) Net Amount ($1,000)
		Over Disclosed		Under Disclosed											
		Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number			
Chicago - 15	2	504	12,794	0	0								504	12,794	+12,794
Chicago - 16	1	1	60	0	0	1	1	2	68	8	194		12	323	- 67
Chicago - 17	1	2	105	2	112	1	5						5	222	- 2
Chicago - 18	1	3	82	29	811			2	72	4	140		38	1,105	- 797
Chicago - 18	2	3	61	25	684					2	36		30	781	- 659
Chicago - 19	1	7	59	0	0	4	9					2	13	68	+ 68
Chicago - 20	1	11	67	5	19	2	2	1	9				19	97	+ 59
Chicago - 21	1	101	2,306	6	65	1	3						108	2,374	+ 2,238
Chicago - 22	1	1	16	1	11			1	132			2	5	159	+ 137
Chicago - 23	1	18	507	16	672			1	58			10	45	1,237	- 107
Chicago - 23	2	109	3,812	118	4,692	1	2						228	8,506	- 878
Chicago - 24	1	67	968	0	0								67	968	+ 968
Chicago - 24	2	183	4,151	1	125					1	125		185	4,401	+ 3,901
Chicago - 25	1	7	244	0	0	1	7						8	251	+ 251
Chicago - 26	1	111	65,210	325	8,942								436	74,152	+56,268

Census tract assignment errors are the most significant problem in terms of both the number of errors and the dollar volume of errors. Such assignment errors occur when loans are either incorrectly aggregated into a census tract line or incorrectly omitted from a census tract line. A total of 2,270 loans were over-disclosed and 579 loans were under-disclosed in the sampled census tracts. Although the geocoding accuracy determined for the Chicago SMSA was appreciably lower than that calculated for either the Buffalo and San Diego SMSAs these census tract assignment errors still cannot be attributed to geocoding itself Instead, they occur because of inadequacies in the institution's procedures for selecting loans from files, transferring these data to other files, and aggregating the data into the disclosure statement.

By far the most inaccurate disclosure statement found in the study was prepared by the institution designated Chicago-7. This institution over-reported 736 loans at dollar value of $12,803,000 in the 15 census tracts in the sample. The number of loans that were over-reported in each census tract varied from 2 to 612. No reason could be given by the institution to account for errors of this magnitude, since the person responsible for preparation of the 1977 state disclouære statement was no longer with the institution.

The second most inaccurate statement in the study was prepared by the institution designated Chicago-15. Here the institution over-reported 504 loans at a dollar value of $12,794,000 in the 15 census tracts in the sample. The number of loans that were over-reported in each census tract varied from 1 to 418. Again, no reason could be given by the institution to account for errors of this magnitude, since the persons responsible for preparation of the 1977 state disclosure statement were no longer with the institution.

Table 4.6 shows the results of the analysis of aggregation errors for the 25 sampled institutions. The average number and amount of loans per census tract is shown in columns (e) and (f). For these institutions the average number of loans per census tract ranged from approximately 1.8 to 28.9 loans, and the average amount of loans per census tract ranged from

TABLE 4.6: ANALYSIS OF AGGREGATION ERRORS FOR THE CHICAGO SMSA

INSTITUTION DESIGNATION	C'al Bank(C) Savings Bank (B) S&L (S)	Federal(F) or State(S) Disclosure Statement	(a) Amount of Loans in 1977 Disclosure Statement ($1,000)	(b) Number of Loans in 1977 Disclosure Statement	(c) Number of Loans on 1977 Loan Roster	(d) Number of Census Tracts in 1977 Disclosure Statement	(e) Average Number of Loans per Census Tract (b÷d)	(f) Average Amount of Loans per Census Tract ($1,000)(a÷d)	Errors Per Sampled Census Tracts (g) Average No. of Errors (Table 4.4 e÷a)	(h) Average Cumulative Amount of Error ($1000)	(i) Average Net Amount of Error($1000)	Percentage Error Per Census Tract (j) Ave.No.Errors / Ave.No.Loans (g÷e)	(k) Ave.Cum.Am't Errors / Average Amount Loans (h÷f)	Extrapolated Cum. Amount of Error for All Census Tracts (h×d) ($1,000)
Chicago - 1	S	F	20,913	586	596	147	4.0	142.3	1.1	39.7	21.3	27.5	27.9	5,836
Chicago - 2	S	F	76,757	1,269	1,243	356	3.6	215.6	.33	11.6	11.6	9.1	5.4	4,130
Chicago - 3	C	F	1,987	50	75	12	4.2	165.6	2.2	61.2	23.1	52.4	37.0	734
Chicago - 4	S	F	238,454	7,438	6,602	911	8.2	261.7	1.5	55.8	39.9	18.3	21.3	50,834
Chicago - 5	C	F	34,951	1,959	817	147	13.3	237.8	11.9	223.5	222.4	89.5	94.0	32,854
Chicago - 6	C	S	3,155	113	109	63	1.8	50.1	1.9	50.0	33.9	105.5	99.8	3,250
Chicago - 7	S	S	20,578	1,011	380	35	28.9	587.9	49.1	853.5	853.5	169.9	145.2	29,873
Chicago - 8	S	S	4,089	108	166	22	4.9	185.9	---------- NO DATA ----------					
Chicago - 9	S	F	15,255	436	490	33	13.2	462.3	3.2	94.7	45.7	24.2	20.5	3,125
Chicago - 10	S	S	11,538	317	317	118	2.7	97.8	.67	33.8	25.3	24.8	34.6	3,988
Chicago - 11	S	F	46,880**	1,175*	1,175	107	10.9	438.1	1.6	43.1	11.9	14.7	9.8	4.612
Chicago - 12	S	F	183,089	4,624	4,623	448	9.5	375.2	2.1	81.5	56.5	22.1	21.7	39,772
Chicago - 13	C	F	8,862	295	296	139	2.1	63.8	.33	2.5	1.3	15.7	3.9	348
Chicago - 14	C	S	980	98	80	29	3.4	33.8	1.7	8.7	1.7	50.0	25.7	252
Chicago - 15	C	S	42,927	1,531	357	105	14.6	408.8	19.8	506.4	506.4	135.6	123.9	53,172

*Determined from Loan Roster

**Determined from Average Loan Size

TABLE 4.6: ANALYSIS OF AGGREGATION ERRORS FOR THE CHICAGO SMSA (Continued)

INSTITUTION DESIGNATION	C'ml Bank(C) Savings Bank (B) S&L (S)	Federal(F) or State(S) Disclosure Statement	(a) Amount of Loans in 1977 Disclosure Statement ($1,000)	(b) Number of Loans in 1977 Disclosure Statement	(c) Number of Loans on 1977 Loan Roster	(d) Number of Census Tracts in 1977 Disclosure Statement	(e) Average Number of Loans per Census Tract (b÷d)	(f) Average Amount of Loans per Census Tract ($1,000) (a÷d)	Errors Per Sampled Census Tracts			Percentage Error Per Census Tract		Extrapolated Cum. Amount of Error for All Census Tracts (h×d) ($1,000)
									(g) Average No. of Errors (Table 4.4 e÷a)	(h) Average Cumulative Amount of Error ($1000)	(i) Average Net Amount of Error ($1000)	(j) Ave.No.Errors / Ave.No.Loans (g÷e)	(k) Ave.Cum.Am't Errors / Average Amount Loans (h÷f)	
Chicago - 16	S	F	18,428	423	463	137	3.1	134.5	.8	21.5	4.5	25.8	16.0	2,946
Chicago - 17	S	S	6,261	168	201	23*	7.3	272.2	.33	14.8	.13	4.5	5.4	340
Chicago - 18	C	S	3,405	140*	282	52	2.7	65.5	2.3	62.9	48.5	85.2	96.0	3,271
Chicago - 19	C	S	35,328	955	610	487	2.0	72.5	.87	4.5	4.5	43.5	6.2	2,192
Chicago - 20	C	S	8,955	447	342	96	4.7	93.3	1.3	6.5	3.9	27.7	7.0	624
Chicago - 21	C	S	10,291	503	85	35	14.4	294.0	7.2	158.3	149.2	50.0	53.8	5,541
Chicago - 22	C	S	1,304	62	82	17	3.6	76.7	.33	10.6	9.1	9.1	13.8	180
Chicago - 23	S	F	545,903	13,871	4,107	1,130	12.3	483.1	9.1	324.8	32.8	73.9	67.2	367,024
Chicago - 24	C	F	12,868	623	85	37	16.8	347.8	8.4	179.0	162.3	50.0	51.5	6,623
Chicago - 25	C	S	3,254	183	171	65	2.8	50.1	.53	16.7	16.7	18.9	33.3	1,086
Chicago - 26	S	F	88,281	689	1,170	24	28.7	3,678.4	29.1	4,943.0	3,751.2	101.4	134.4	118,632

*Data based on six months State Disclosure Statement.

approximately $33,800 to $3,678,000. These two values provide a basis for assessing the significance of the number of errors and the amount of errors made by each institution on a per-tract basis.

The average number and amount of errors made per census tract is shown in column (g) and (h), respectively. The average number of errors per census tract ranged from .33 to 49.1, and the average cumulative amount of error per census tract ranged from approximately $2,500 to $4,943,000.

The error rate per census tract is shown in columns (j) and (k). The percentage of the number of errors to the number of loans per census tract ranged from 4.5 to 169.9 percent, and the percentage of the amount of errors to the amount of loans per census tract ranged from 5.4 to 145.2 percent.

Twenty of the twenty-five institutions incurred per-tract-error rates, in either the number or dollar amounts of loans, of greater than 20 percent, and 3 of the 25 institutions incurred per-tract-error between 10 and 20 percent. Only two institutions incurred a per-tract-error rate of less than 10 percent. It is felt that a per-tract-error rate of 20 percent or more in either the number or dollar amount of loans renders a disclosure statement unacceptably inaccurate. It is also felt that a per-tract-error rate between 10 and 20 percent renders the accuracy level of a disclosure statement to be marginally acceptable. On this basis and with the assumption that the data extracted by the regulatory examiners accurately reflect the loan data that should have been reported on the disclosure statements, it is concluded that: 1) the disclosure statements of 20 of the 25 institutions in the Chicago sample are of unacceptable accuracy, 2) the disclosure statements of 3 of the 25 institutions are of marginally acceptable accuracy, and 3) the disclosure statement of 2 institutions are acceptable.

CHAPTER 5

FINDINGS AND CONCLUSIONS

This chapter presents the conclusions and observations derived from the accuracy analysis. The discussion is presented in three sections: Findings on geocoding accuracy, findings on aggregation accuracy, and conclusions.

5.1 FINDINGS ON GEOCODING ACCURACY

The results of the analysis of the accuracy of geocoding show that institutions in the Buffalo and San Diego SMSAs achieved an overall average accuracy level of approximately 90 percent, but that institutions in the Chicago SMSA only achieved an overall average accuracy level of approximately 82 percent. Table 5.1 summarizes the findings for the geocoding accuracy levels in the three SMSAs. These results are expressed in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 5.1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN BUFFALO, CHICAGO, AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
Mean Percentage of Accuracy	93.16	92.05	82.27
Standard Percentage of Error	1.51	1.49	3.11
95 Percent Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

The results of the geocoding accuracy analysis can be expressed on either a "per-institution" or "per-SMSA" basis. For the Buffalo SMSA, for example, it can be stated with 95 percent confidence, that the accuracy with which institutions in the Buffalo SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement for the Buffalo SMSA lies between 90.2 and 96.1 percent. Seen on a per-institution bases, however, it can be stated that there is a 95 percent probability that the geocoding accuracy level of any selected institution in the Buffalo SMSA will fall between 90.2 and 96.1 percent. Similar conclusions can be drawn based on the data for institutions in the San Diego and Chicago SMSAs.

The results of the analysis of geocoding accuracy show that depository institutions in the Buffalo and San Diego SMSAs are achieving acceptable geocoding accuracy levels, but that approximately 35 percent of the depository institutions in the Chicago area are achieving unacceptable accuracy levels below 80 percent. These results are summarized in Table 5.2.

TABLE 5.2: GEOCODING ACCURACY

		Accuracy ≥ 80%		Accuracy ≥ 85%		Accuracy ≥ 90%	
SMSA	Number of Institutions Sampled	Number	Percent	Number	Percent	Number	Percent
Buffalo	8	8	100	7	87.5	6	75
Chicago	26	17	65	16	61.5	13	50
San Diego	10	10	100	10	100	7	70
Total	44	35	79.5	33	75	27	61

The accuracy results for the Chicago SMSA show that geocoding can be performed accurately, if the currently available address coding guides are obtained and used properly and if the census tract numbers assigned to addresses are accurately recorded and maintained on files for subsequent use in the preparation of the disclosure statement.

Two reasons account for the low accuracy levels achieved by nine of the twenty-six sampled institutions in Chicago. Six of the nine relied solely on census tract maps or other maps to perform geocoding. Such maps, by themselves, are not adequate for geocoding. Three of the nine either did not use address coding guides properly or did not accurately record and maintain the results of their geocoding of addresses to census tracts. A companion report entitled "Methods to Improve Geocoding Accuracy"[1] suggests that regulatory examination procedures include a review of the geocoding methods used by depository institutions and recommendations for use of proper geocoding tools (i.e., address coding guides) and record maintenance methods.

5.2 FINDINGS ON AGGREGATION ACCURACY

Results of aggregation accuracy were obtained for 43 institutions in three study SMSAs. Aggregation errors of four types were defined and analyzed:

> Census tract assignment errors occur when a loan is incorrectly included in a census tract line or when a loan is incorrectly excluded from a census tract line.
>
> Computation errors occur when either the number or the dollar amounts of loans on the disclosure statement are incorrect.
>
> Inappropriate loan errors occur when a loan that does not meet the Regulation C criteria is included in a disclosure statement.

Types of loan errors fall into two categories. The first category occurs when an institution assigns a loan to one type of loan column when in fact the loan belongs in another type of loan column (e.g., FHA instead of conventional. The second category involves nonoccupant loans, either when nonoccupant loans are reported only in the nonoccupant addendum item column and are not spread throughout the other appropriate columns, or when nonoccupant loans are not included in the nonoccupant addendum item column.

Four of the eight sampled institutions in the Buffalo SMSA made aggregation errors in more than 50 percent of the census tract lines sampled. The most significant problem was census tract assignment errors caused by either incorrectly aggregating loans into a census tract line or incorrectly omitting loans from a census tract line. These errors occur because of inadequacies in the institution's procedures for selecting loans from the file, transferring these data to other files, and aggregating the data into the disclosure statement. This causes loans to be over-disclosed or under-disclosed in the census tract line. A total of 99 loans were over-disclosed and 82 loans were under-disclosed in the 210 census tracts in the sample.

Three of the ten sampled institutions in the San Diego SMSA made errors in more than 50 percent of the census tract lines in the sample. The two most significant problems were census tract assignment errors and the inappropriate inclusion of short term construction loans. A total of 217 loans were over-disclosed and 81 loans were under-disclosed in the 225 census tracts in the sample. A total of 43 inappropriate loans with a value in excess of $20 million were included in these census tracts Many of these were short term condominium construction loans in excess of $1 million each.

Eighteen of the 25 sampled institutions in the Chicago SMSA made errors in more than 50 percent of the census tract lines in the sample. Census tracts assignment errors were the most significant problem. A total of 2270 loans were over-disclosed and 579 loans were under-disclosed in the 435 census tracts in the sample.

The number of aggregation errors and the dollar amount of the aggregation errors found in each sampling unit of 15 census tracts are only meaningful when viewed relative to the overall average number and amount of loans that were included in the census tracts. Accordingly, two major indices, expressed as percentages, are used in the analysis to assess each institution's aggregation error level. The first index is the number of errors made per census tract relative to the number of loans per census tract. The second index is the dollar amount of errors made per census tract relative to the dollar amount of loans per census tract. Some institutions incurred significant error levels on the basis of the number of errors per loan in each census tract, while other institutions incurred significant error levels on the basis of the amount of error per amount of loans in each census tract.

A judgment was made that error levels in excess of 20 percent on the basis of either the number or the amount of error, render a disclosure statement unacceptably inaccurate. An error level between 10 and 20 percent was judged to render a disclosure statement of marginally acceptable accuracy. An error level of less than 10 percent was judged to result in an acceptably accurate disclosure statement.

Table 5.3 presents the results from the aggregation analysis for the 43 institutions in the three SMSAs. The number and percentage of institutions that were found to be in each of the three error levels are shown in the table. An institution was placed in one of the three error levels in accordance with the higher of its two error levels (i.e., number or amount of errors).

TABLE 5.3: PERCENTAGE OF AGGREGATION ERRORS BY INSTITUTIONS IN THREE SMSAs

Error Level Per Census Tract	SMSA						TOTAL	
	Buffalo Institutions		San Diego Institutions		Chicago Institutions			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-10 Percent	1	12.5	2	20	2	8	5	11.6
10-20 Percent	3	37.5	3	30	3	12	9	20.9
Greater than 20 Percent	4	50.0	5	50	20	80	29	67.5

Four of the eight institutions in the Buffalo SMSA incurred per-tract-error levels greater than twenty percent, and three of the eight incurred per-tract-error levels betwen ten and twenty percent. Only one institution incurred a per-tract-error level of less than ten percent.

Five of the ten institutions in the San Diego SMSA incurred per-tract-error rates of greater than twenty percent, three of ten incurred per-tract-error levels of between ten and twenty percent and two incurred per-tract-error levels of less than ten percent.

Twenty of the twenty-five institutions in the Chicago SMSA incurred per-tract-error levels of greater than twenty percent, three of twenty-five incurred per-tract-error levels between ten and twenty percent, and two institutions incurred per-tract-error levels of less than ten percent.

REFERENCES

JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Methods to Improve [illegible]ding Accuracy," November 1979.

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1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Methods to Improve Geocoding Accuracy," November 1979.

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3. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Utility of the Home Mortgage Disclosure Act," November 1979.

4. Thomas Brothers Maps, 1978 Edition.

5. Dun & Bradstreet BANCODE Census Coding Directory.

6. Bureau of the Census, Census Tract Map, PH 1 Series, Metropolitan Map Series.

5.3 CONCLUSIONS

The conclusion from the Accuracy portion of the study is that the geocoding and aggregation accuracy error rates of a significant number of institutions are greater than 20 percent. Results on geocoding and aggregation accuracy are not assessed in a combined fashion. Inaccuracy levels of greater than 20 percent in either category are considered to be unacceptable.

It was concluded, based on these findings, that steps need to be taken to identify institutions with inadequate geocoding and aggregation accuracy levels, and to raise the accuracy levels to an acceptable level. Two steps to overcome accuracy related problems are suggested in a companion report "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements."[2] First it is suggested that institutions be required to maintain a loan listing containing complete information (e.g., loan number, type of loan, census tract, etc.) on each loan in the disclosure statement. Second, it is suggested that regulatory examiners "spot check" the accuracy of aggregation using procedures outlined in the companion report.

A companion study report entitled "Utility of the Home Mortgage Disclosure Act present an assessment of the usefulness and cost of the Home Mortgage Disclosure Act.[3] The conclusion is reached that the Home Mortgage Disclosure Act should be extended. However, this conclusion is based upon several conditions, one being that the regulatory agencies take appropriate steps to ensure the data disclosed are accurate.

REFERENCES

1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Methods to Improve Geocoding Accuracy," November 1979.

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3. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Utility of the Home Mortgage Disclosure Act," November 1979.

4. Thomas Brothers Maps, 1978 Edition.

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6. Bureau of the Census, Census Tract Map, PH 1 Series, Metropolitan Map Series.

APPENDIX A

RECOMMENDED PROCEDURES
FOR PHASE II STATISTICAL SAMPLE DESIGN

FHLBB Contract # 677040
JRB Contract # 2-800-04-118-02

February 27, 1978

Submitted to
Federal Deposit Insurance Corporation
and
Federal Home Loan Bank Board

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
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DRAFT

1. INTRODUCTION

This report provides information concerning cluster sampling with probability proportional to size relative to Phase II, Accuracy. A separate companion roport is also being submitted which addresses recommended audit procedures and the pretest plan. The relationship of these aspects of Phase II to each other, and to the remaining tasks in Phase II, is depicted in Figure 1.

The objective of Phase II is to estimate the accuracy with which the depository institutions are compiling their HMDA reports and to gather data on the methods, costs, and problems associated with the preparation of the report. This report describes the recommended procedures for selecting a sample of the depository institutions in the three SMSA's and, within these institutions, for selecting a sample of mortgage loans for geocoding analysis and for selecting a sample of census tracts for aggregation analysis. These procedures will be used by JRB personnel in conjunction with FHLBB/FDIC examiners to obtain the information necessary to estimate the degree of accuracy in report preparation. In addition, a survey will be conducted to determine the methods, costs, and problems associated with preparation of the HMDA report. This information will be used as the basis for several of the reports in Phase IV. JRB's original plan was to conduct only a limited pretest of the on-site audit procedures and survey methods. This pretest was to be done at one or two local depository institutions, and it was to be only a check on the workability of the data collection procedures. During the discussion of the detailed work plan, it was felt that this limited approach was not sufficient to test against the possible difficulties and problems that might be encountered in the various banks and savings and loans.

The new plan expands the pretest into a complete test of all audit, survey, and estimation procedures in three to six depository institutions in

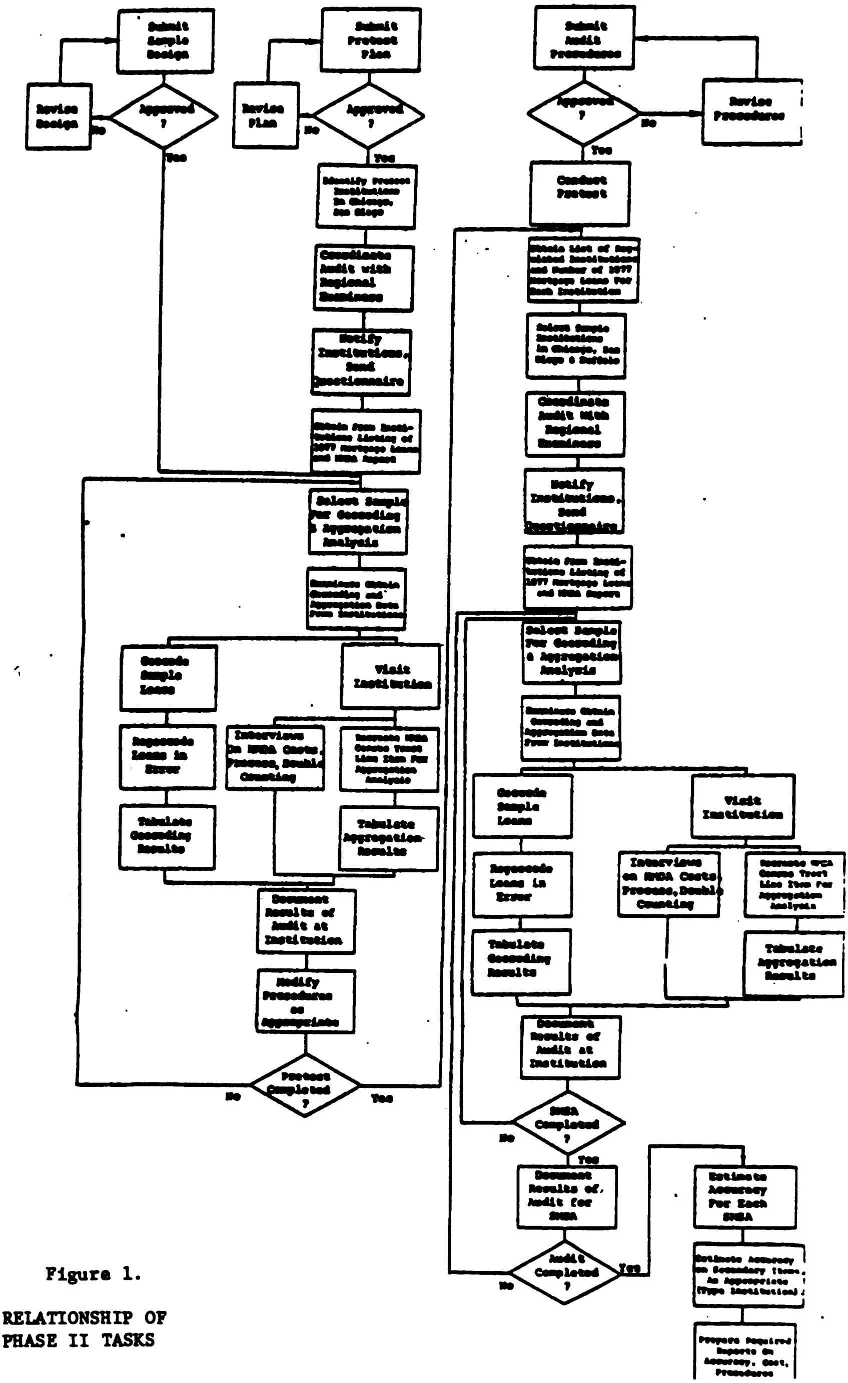
Submit Sample Design
Approved ?
Revise Design
No
Yes
Submit Pretest Plan
Approved ?
Revise Plan
No
Yes
Identify Pretest Institutions In Chicago, San Diego
Coordinate Audit with Regional Examiners
Notify Institutions, Send Questionnaire
Obtain From Institutions Listing of 1977 Mortgage Loans and HMDA Report
Select Sample For Geocoding & Aggregation Analysis
Examiners Obtain Geocoding and Aggregation Data From Institutions
Geocode Sample Loans
Visit Institution
Regeocode Loans in Error
Interviews On HMDA Costs, Process, Double Counting
Recreate HMDA Census Tract Line Item For Aggregation Analysis
Tabulate Geocoding Results
Tabulate Aggregation Results
Document Results of Audit at Institution
Modify Procedures as Appropriate
Pretest Completed ?
No
Yes
Submit Audit Procedures
Approved ?
No
Revise Procedures
Yes
Conduct Pretest
Obtain List of Regulated Institutions and Number of 1977 Mortgage Loans For Each Institution
Select Sample Institutions in Chicago, San Diego & Buffalo
Coordinate Audit With Regional Examiners
Notify Institutions, Send Questionnaire
Obtain From Institutions Listing of 1977 Mortgage Loans and HMDA Report
Select Sample For Geocoding & Aggregation Analysis
Examiners Obtain Geocoding and Aggregation Data From Institutions
Geocode Sample Loans
Visit Institution
Regeocode Loans in Error
Interviews on HMDA Costs, Process, Double Counting
Recreate HMDA Census Tract Line Item For Aggregation Analysis
Tabulate Geocoding Results
Tabulate Aggregation Results
Document Results of Audit at Institution
SMSA Completed ?
No
Yes
Document Results of Audit for SMSA
Audit Completed ?
No
Yes
Estimate Accuracy For Each SMSA
Estimate Accuracy on Secondary Items, As Appropriate (Type Institution)
Prepare Required Reports On Accuracy, Cost, Procedures

Figure 1.

RELATIONSHIP OF
PHASE II TASKS

he study SMSA's. This complete pretest will accomplish four important irposes. First, it will reduce the risk of encountering serious problems ien the complete audit is conducted in the sample of 60 institutions. econdly, it will provide a preview of the results to be expected in the stimation of accuracy. Thirdly, it will allow a refinement of the estimated ffort required to conduct the full accuracy audit. Fourthly, it will provide id early indication as to whether or not these procedures and data can be sed in other areas (i.e., Community Reinvestment Act, Civil Rights Settle- ent).

During the pretest, the adequacy of the procedures used to gather data id quantify the errors in the HMDA reports will be thoroughly tested on-site. ijustments to the procedures will be made to eliminate the amount of trial- /-error time that would otherwise be expended during the conduct of the mplete accuracy audit of 60 institutions. One critical aspect of the curacy analysis yet to be completely resolved is the precise role of the egional examiners in the identification and retrieval of pertinent data om those institutions selected for audit.

The level of effort necessary by the institution in the preparation the HMDA report and in responding to the audit will both be estimated in erms of:

- number of personnel required
- number of person-hours required
- number of computer programs required
- amount of computer time required
- expected costs to each institution.

The pretest of three institutions will provide the FHLBB and the FDIC th insight into the procedural and organizational problems associated with iditing the accuracy of the HMDA reports. Following the pretests, it will possible to refine the estimated effort required to conduct the full curacy audits. If the results of the initial three institutions are not ifficiently conclusive, up to three more institutions will be pretested.

The procedures assume that the following information would be provided to JRB by the FHLBB, the FDIC or the regional examiners:

1. For each SMSA, a list of all institutions required to report under the Act, and, for each, the number of mortgage loans made in 1977.
2. For each institution to be sampled, a copy fo their 1977 HMDA report.
3. For each institution to be sampled, a listing, by loan number, of all mortgage loans made in 1977.
4. For each mortgage loan selected for geocoding analysis, a listing of the mortgage loan number, the complete property address (street, city, state, zip code) and the census tract.
5. For each of the 15 census tracts selected for aggregation analysis, and extract from the mortgage files of the following information on all loans (single family, multifamily, home improvement, and non-occupant): census tract, dollar amount of loan, type of loan (FHA, VA, FMHS, Conventional) home improvement indicator, non-occupant ndicator, multifamily dwelling indicator, and originated or purchased indicator.

During discussions with the FHLBB, JRB has proposed that, whenever available, an automated listing of data necessary for the geocoding analysis be considered as *ground truth* for the purpose of this study, since the accuracy of the property address and loan number of selected mortgages on the computerized file is anticipated to be acceptable.

For the aggregation analysis, however, computerized data may not be acceptable as *ground truth*, and JRB has proposed that the examiners extract the information identified in item #5 above from the individual loan jackets, preferably by reproducing a copy of the loan agreement.

It has also been suggested that the visits by JRB to the institutions be coordinated with the institution's scheduled audit by the regional examiners. Whenever possible, JRB will attempt this coordination both during the pretest and during the complete audit.

2. STATISTICAL SAMPLE DESIGN

This chapter presents details of cluster sampling with probability portional to size relevant to Phase II, Accuracy.

OVERVIEW

The primary objective of the proposed sampling is to investigate the uracy of loan geocoding within each of three SMSA's. Thus, the population be sampled is the collection of loan reports within a SMSA.

Drawing a simple random sample from the population would be difficult ause of the need to prepare a list of all loans in a SMSA and the high t of surveying geographically scattered sampling units. The sampling vey is made easier in terms of preparation, cost and administration if sampling units that are to be selected were in clusters. Accordingly h institution is considered as a cluster and a random sample of institutions selected. In other words, instead of selecting loans one at a time, we ect groups of loans, where each group is in the same institution. Once sample of institutions is selected, then random samples of loans are selected each selected institution.

In this two-stage sampling plan, each institution or cluster is called rimary sampling unit and the loans are called sampling subunits. The first ge of the sampling plan involves selection of a sample of primary sampling ts where the probability of selection is proportional to the size of the t. The second stage involves selecting a constant number of subunits each selected primery unit using simple random sampling. This approach ures thateach loan within a SMSA has an equal probability of being sampled. ce there is no evidence to suggest that geocoding accuracy is highly corated with size or type institution, stratification to control these paraers is not used.

The reduction in cost and ease of administration for cluster sampling ows selection of a larger sample than with a one-stage simple random pling plan. This increase in sample size should more than compensate for loss in precision because of the use of cluster sampling rather than gle random sampling. The sample of institutions and loans within an instiion will be large enough so that loan geocoding accuracy can be estimated with sufficient precision. For other characteristics of secondary importance, we will accept whatever precision is attained. Some of the characteristics of secondary importance will be estimated with sufficient precision, whereas others will be estimated with less than the desired precision. In either case, the various results of the sample must be interpreted in light of the precision actually attained.

2.2 Notation

M = number of clusters (institutions) or primary sampling units in the population

m = number of clusters selected for sampling

N_i = number of subunits (loans) in the i^{th} cluster

n_i = number of subunits sampled from the i^{th} cluster

$N = \sum_{i=1}^{M} N_i$ = number of subunits in the population

$n = \sum_{i=1}^{m} n_i$ = number of subunits in the sample

$$X_{ij} \begin{cases} = 1 = \text{accurately coded population loan } j \text{ from psu } i \\ = 0 = \text{inaccurately coded population loan } j \text{ from psu } i \end{cases}$$

$$x_{ij} \begin{cases} = 1 \text{ accurately coded sample loan } j \text{ from psu } i \\ = 0 \text{ inaccurately coded sample loan } j \text{ from psu } i \end{cases}$$

$X_i = \sum_{j=1}^{N_i} X_{ij}$ number of subunits accurately coded in i^{th} psu

$x_i = \sum_{j=1}^{n_i} x_{ij}$ number of subunits accurately coded in sample taken from i^{th} psu

$X = \sum_{i=1}^{M} X_i$ = number of subunits accurately coded in population

$x = \sum_{i=1}^{m} x_i$ = number of subunits accurately coded in sample

$P_i = \frac{X_i}{N_i} = \overline{X_i}$ = proportion of loans coded correctly in i^{th} psu

$p_i = \frac{x_i}{n_i} = \overline{x_i}$ = proportion of loans coded correctly in sample taken from i^{th} psu

$P = \frac{X}{N} = \overline{X} = \frac{1}{N} \sum_{i=1}^{M} N_i P_i$ = proportion of loans coded accurately in population

$p = \frac{x}{n} = \overline{x} = \frac{1}{n} \sum_{i=1}^{m} n_i p_i$ = proportion of loans coded accurately in sample

2.3 Sampling Procedure

The sampling procedure will be described by way of example. The following steps are involved:

1. Identify each institution and its size N_i in terms of the number of loans geocoded during a particular time period.
2. List the institutions as in the example shown below.

Institution (psu)	Size N_i	N_i	Assigned Range
A	350	350	1-350
B	127	477	351-477
C	4,520	4,997	478-4,997
D	117	5,114	4,998-5,114
E	316	5,430	5,115-5,430
F	3,010	8,440	5,431-8,440
G	1,843	10,283	8,441-10,283

3. For the example, we select a number between 1 and 10,283 at random. If the number 00399 is chosen, it falls between 351-477 and so Institution B would be selected. Note that the probability of selecting the i^{th} institution is

$$p_i = \frac{N_i}{\Sigma N_i} = \frac{N_i}{N}$$

That is, the psu are selected with probability proportional to size, where size refers to the size of the psu in terms of N_i, the number of loans, and not in terms of the number of accurately coded loans. For an unbiased estimate of the number or proportion of accurately coded loans, we should be selecting probability proportional to the number of correct loans, i.e., we are substituting N_i/N as a good estimate of X_i/X.

4. The above step is repeated until the required number of primary sampling units are selected. Note that since we are sampling with replacement, it is possible for any particular institution to be selected more than once, i.e., one institution can represent more than one sampling unit.
5. For each of the m primary sampling units selected (the same institution may be represented more than once), we draw a subsample of size $\bar{n}$ according to the following steps.
   a. For a selected institution, make a list of the geocoded loans and give each a number from 1 to N_i--the total number of loans in the institution.
   b. Select $\bar{n}$ random numbers ($\bar{n}$ loans) from 1 to N_i without replacement. For example, if there were 127 loans in a selected institution and we were to sample 8 of these, we would need to generate a series of three-digit random numbers. Numbers greater than 127 will not correspond to a loan number and to avoid wasting a large portion of the random numbers, we can divide each number bv 127 and use the remainder

as the selected random number. A remainder of zero corresponds to the 127th loan. In this way, we are using 7 full intervals from 1 to 127 rather than just one. Random numbers from 890 to 999 are discarded. The following example illustrates the procedure.

Random Numbers	Remainder	Selected Loan No.
231	104	104
055	55	55
148	21	21
389	8	8
973	skip	
117	117	117
433	52	52
983	skip	
495	114	114
367	113	113

Note that the sampling is without replacement and so the probability of the first loan selection is $1/N_i$; the probability of the second selection is $1/(N_i-1)$, and so forth.

c. Repeat the above steps for each of the m selected primary sampling units. If an institution was selected more than once in the first sampling stage, it is possible for a loan to be selected more than once in the second stage of sampling. This can occur because each sample of loans is selected from the complete psu. That is, the second sample is selected after replacing the loans that were selected the first time. A loan that happens to be part of more than one sample is treated no different statistically than any other loan which is selected as part of a particular random sample from a psu, i.e., the loan becomes part of two different, statistically independent samples.

ote: It is possible that the number of loans within a particular institution is less than the number of loans to be selected for sampling. In this case, the procedure outlined in Step 2 must be modified. One method for dealing with the problem of cluster sites smaller than $\bar{n}$ is to combine such psu's with adjoining ones, in advance of the sample selection, so that all psu's so constructed are of size equal to or greater than $\bar{n}$. A small psu may be combined with one or more other small psu's or with a psu already of size $\bar{n}$ or greater.

2.4 Estimation

The main objective of the sampling survey is to estimate the proportion of loans accurately geocoded. This section shows how an estimator of this population parameter is calculated. The estimator is based on a sample of the loan population and, therefore, a "sampling error" is associated with the estimate. To partially overcome this inadequacy associated with a point estimate, we estimate its variance and use this in the determination of an interval estimate which is made with a specified confidence. The point estimator determination is shown as item 1 below and then three further steps lead to the interval estimator.

1. $\hat{P}$: Unbiased estimator for proportion of loans coded accurately in population

$$\hat{P} = \frac{1}{m\bar{n}} \sum_{i=1}^{m} \sum_{j=1}^{\bar{n}} x_{ij} = \frac{1}{m} \sum_{i=1}^{m} p_i = \frac{\bar{n}}{n} \sum_{i=1}^{m} p_i = p$$

2. $V(\hat{P})$: Variance of estimator of P

$$V(\hat{P}) = \frac{1}{mN} \sum_{i=1}^{M} N_i(\bar{X}_i-\bar{X})^2 + \frac{1}{mN} \sum_{i=1}^{M} (N_i-\bar{n}) \frac{S_i^2}{\bar{n}} = \frac{1}{mN} \sum_{i=1}^{M} N_i(P_i-P)^2 + \frac{1}{mN} \sum_{i=1}^{M} (N_i-n)\frac{S_i^2}{\bar{n}}$$

where $S_i^2 = \frac{1}{N_i-1} \sum_{j=1}^{N_i} (X_{ij}-\bar{X}_i)^2 = \frac{N_i}{N_i-1} P_i(1-P_i)$

The first term on the right-hand side shows the variation between cluster means. The second term on the right-hand side shows the variation of the subunits within the clusters.

$\sigma_{\hat{p}} = \sqrt{V(\hat{P})}$ is called the standard deviation.

Computation of $V(\hat{P})$ is not possible since it requires knowledge of X_{ij} for every loan in the SMSA. Thus, we use the sample estimator $\hat{V}(\hat{P})$.

3. $\hat{V}(\hat{P})$: Unbiased estimator of the variance of the estimator P.

$$\hat{V}(\hat{P}) = \frac{1}{m(m-1)} \sum_{i=1}^{m} (\bar{x}_i-\bar{x})^2 = \frac{1}{m(m-1)} \sum_{i=1}^{m} (p_i-p)^2$$

Note that this simple form results because the psu's are sampled with probability proportional to size and with replacement.

$s_{\hat{p}} = \sqrt{\hat{V}(\hat{P})}$ is called the standard error.

$\hat{P} - z_\alpha s_{\hat{P}} < P < \hat{P} + z_\alpha s_{\hat{P}}$: Confidence interval for P based on assumption that distribution of $\hat{P}$ has a normal distribution.

constructing the confidence interval estimator for P, we need to determine margin of error, or precision, represented by $d=z_\alpha s_{\hat{P}}$ when the assumption of mality holds. The distribution of $\hat{P}$ is approximately normal when the sample e and value of $\hat{P}$ meet the following criteria as stated by W. G. Cochran mpling Techniques, 3rd ed., New York: John Wiley & Sons, Inc., 1977. p. 58).

$\hat{P}$	Sample Size
.5	≥ 30
.4 or .6	≥ 50
.3 or .7	≥ 80
.2 or .8	≥ 200
.1 or .9	≥ 600
.05 or .95	≥ 1400

When the sample size is not sufficient to justify the normality assumption ed on the above criteria, then a confidence interval can be found based on actual distribution of the estimate of P. The actual distribution is a hypermetric and published tables are available for various ranges of $\hat{P}$ and sample e. When the sample size is small relative to the total population (number of ns), then the binomial distribution is an accurate representation of the disbution and the comprehensive sets of tables available for the binomial can be d.

The sample size is generally of sufficient magnitude so at the assumption of normality holds. In this case, we d to determine z_α and $s_{\hat{P}}$ as noted above to construct the confidence interval. variable $s_{\hat{P}}$ is the standard error associated with the estimator $\hat{P}$ and is culated as shown in Step 3. The variable z_α is the abscissa of the normal ve that cuts off an area of α at the tails where $1-\alpha$ is the reliability of confidence interval in encompassing P. For example, for a 95% reliability 1.96 as determined from tables of the normal distribution. Thus, for a ticular reliability and standard error, it is possible to make a statement arding the margin of error, or precision, of the estimator of P. A common expression of this is to state that with confidence or reliability (1-α)%, the interval $\hat{P}\pm d$ includes the true value for the proportion P. More precisely, once the value of $\hat{P}$ and d have been determined, what we are saying is that in the long run, (1-α)% of the intervals so computed can be expected to include the true proportion P.

Note that the precision d and the reliability are related. If for a particular standard error, the probability is 19 in 20 (95% confidence level) that the sample estimate will be within .10 (d=.10) of the true figure, then 99 out of 100 times it will be within .125 and 997 out of 1000 times it will be within .15.

Sample Size - Cost Constraints

To implement the described cluster sampling plan, we must determine apriori many institutions (m) are to be selected for sampling and how many loans ($\bar{n}$) to be sampled from each of the m institutions. The values for m and $\bar{n}$ should determined such that the variance of the point estimator of the proportion of urate loans, $V(\hat{P})$, will be a minimum for any given level of total sampling t.

The objective, then, is to minimize $V(\hat{P})$ as calculated in the above section estimation subject to the cost constraint

$$c = c_0 + c_1 m + c_2 m\bar{n}$$

re c_0 represents total fixed costs, c_1 represents the cost associated with ecting and preparing an institution for sampling, and c_2 represents the cost ociated with selecting and inspecting a loan record for geocoding accuracy. e that only the costs $c_1 m$ and $c_2 m\bar{n}$ are affected by the values of m and $\bar{n}$ and only these variable components of the cost function will be considered ther.

Using the Lagrangian multiplier method, we can convert the above stated strained minimization problem into an unconstrained problem and use ordinary lculus to find the optimal value of $\bar{n}$ and, hence, m for any particular level variable cost.

$$\bar{n} = \sqrt{\frac{c_1}{c_2}\,\frac{\bar{s}_i^2}{s_b^2 - (\bar{s}_i^2/\bar{N})}}$$

sample estimate of the variance between institutions is shown by s_b^2 where

$$s_b^2 = \frac{1}{m-1}\sum_{i=1}^{m}(p_i - p)^2$$

sample estimate of the variance within an institution is given by s_i^2 where

$$s_i^2 = \frac{1}{\bar{n}-1}\sum^{\bar{n}}(x_{ij} - \bar{x}_i)^2 = \frac{\bar{n}}{\bar{n}-1}\,p_i(1-p_i)$$

e last expression follows since simple random sampling is used within institutions. The mean variance $\overline{s_i^2}$ is simply a weighted average of s_i^2

$$\overline{s_i^2} = \frac{1}{m} \sum^{m} s_i^2$$

The s_b^2 and s_i^2 are usually obtained from a pilot survey. However, even without the benefit of a pilot survey, it is possible to establish approximate bounds for the inter- and intra-institutional variances using expert opinion regarding probable values for p_i. The inter-institutional variance should fall within 0.0 to 0.0225. The zero variance corresponds to all p_i being alike. The upper bound corresponds to half of the p_i being relatively low, say 0.7, and the other half being near 1.0. In the event that m, the number of institutions sampled, is as small as m=2, the upper bound is increased to 0.045. The variance within an institution might range from 0.0 to 0.21 which corresponds to a p_i from 1.0 to 0.7. The table below shows the interrelationship between the ranges of these two variances (they are not simultaneously at a maximum).

s_b^2	s_i^2
0.0	0.0 to 0.21
0.0225	0.105
0.045 (m=2)	0.105

This informal analysis of variance ranges suggests that $s_b^2 < s_i^2$ and is supported by another observation: the variance between institutions is a variance of means, the p_i, and, therefore, can be expected to be less than the intra-institutional variance which is a variance among individual observations.

Returning to the determination of m and $\bar{n}$ with this insight into variance ranges, we note that the formula for optimal $\bar{n}$ can be approximated by

$$\bar{n} > \sqrt{c_1/c_2}$$

A reasonable lower value for $\bar{n}$ might be two times $\sqrt{c_1/c_2}$. This inequality is not very helpful in determining $\bar{n}$ when the c_1 and c_2 unit costs are of the same general magnitude. However, for the sampling problem being considered here, the per unit institutional cost c_1 is likely to be on the order of 1000 times greater than c_2 the per unit loan sampling cost and $\sqrt{c_1/c_2}$ then provides a realistic lower bound on $\bar{n}$. When c_1 is several orders of magnitude greater than c_2, the institutional cost component c_1 is the determining factor in establishing an appropriate value for m when the total resources available are restrictive. This can be seen from the cost function.

$$m = \frac{c}{c_1+c_2\bar{n}}$$

The table below demonstrates how m and $\bar{n}$ vary as a function of the cost components. An integer value of m and $\bar{n}$ is determined such that c_1m is as close to c as possible without violating the inequality $\bar{n} \geq 2\sqrt{c_1/c_2}$ and the variable cost bound.

Total Variable Cost	c_1	c_2	m	$\bar{n}$
10,000	1,000	1	9	110
10,000	1,000	5	8	50
10,000	500	1	18	55
10,000	2,000	1	4	500
20,000	1,000	1	18	110
20,000	1,000	5	17	35
20,000	500	1	36	55

It should be noted that the total variable cost bound is only approximate and, thus, in situations where $\bar{n}$ appears smaller than desired (i.e., it is close to the bound $2\sqrt{c_1/c_2}$), it could be increased somewhat without affecting total cost to any great extent.

2.6 Sample Size - Precision Constraints

A remaining question is whether the sample sizes associated with the budget levels in the table shown above, or at any other arbitrary levels, are sufficient to provide a reasonably small margin of error or precision (at, say, a reliability of 95%) in the estimation of P, the proportion of loans accurately geocoded.

Strictly speaking, it is impossible to establish the margin of error until the sample has been obtained. Without the results of a pilot survey to provide at least rough estimates, we must resort to worst case analysis. In this way, we will at least be able to establish an upper bound on the margin of error for a particular sample size, or alternatively, the sample size required to assure a margin of error below a certain magnitude.

As noted above, the margin of error, d, is a function of the desired realiability and the standard error as determined from the expression

$$d = z_\alpha s_{\hat{P}}$$

With the assumption that the distribution of the estimator $\hat{P}$ is approximated by a normal distribution, z is easy to obtain for any desired reliability $1-\alpha$. Establishing upper bounds on $s_{\hat{P}}$ is not as straightforward. As noted in the section on estimation,

$$s_{\hat{P}} = \sqrt{\hat{V}(\hat{P})}$$

where $\hat{V}(\hat{P}) = \frac{1}{m(m-1)} \sum_{i=1}^{m} (p_i - p)^2$

The maximum value for $(p_i-p)^2$ occurs when half of the p_i's are low and the other half are high. If a reasonable lower bound on p_i is 0.7 and an upper bound is 1.0, then the maximum $(p_i-p)^2$ is 0.0225. In this case

$$s_{\hat{P}} = \sqrt{\frac{.0225}{m-1}}$$

a reliability of 95% (z_α = 1.96) and a precision of, say, .05, we find m the relationship between d, z_α and $s_{\hat{p}}$ that the maximum m required is 36. s upper limit on the number of institutions to be sampled is, of course, endent on our worst case estimate of the variance. If the variance is more sonably estimated by half this figure, then the number of institutions sampled ld be cut in half while maintaining the same precision. This would move it hin the range obtained in the cost analysis examples.

A lower estimate of the sample size required to assure a particular bound precision can be obtained by viewing our sample as equivalent to one drawn by a ple random sample. In this way, we can estimate the required sample size ng a simple form for the estimation of the maximum variance. For a simple dom sample, the estimator of the variance of $\hat{P}$ for a sample size of $m\bar{n}$ is

$$s_{\hat{p}}^2 = \frac{p_{ij}(1-p_{ij})}{m\bar{n}-1} \cdot \frac{N-m\bar{n}}{N}$$

n the sample size is small compared to the total population size N, and lacing $m\bar{n}-1$ by $m\bar{n}$ the variance can be approximated by

$$\frac{p_{ij}(1-p_{ij})}{m\bar{n}}$$

letting p_{ij} =0.7, we find

$$s_{\hat{p}} = \sqrt{\frac{.21}{m\bar{n}}}$$

in for a reliability of 95% and a precision of .05, we find that $m\bar{n}$ equals . We know that this sample size is sufficient when it is drawn from oss the entire population. In cluster sampling, we are concentrating our ple of loans from a smaller number of institutions than might be expected be represented from a simple random scheme. To the extent that $\bar{n}$ loans pled from a single institution will have less variance than $\bar{n}$ loans pled from the entire population, this approach underestimates the minimum ple size.

The preceding analyses can be brought together into a single table for various levels of precision and reliability (while keeping the stated estimates of p_i for maximum variance).

d (Precision)	1-α (Reliability)	m with Max. Variance	Equiv. Random Sample Size ($m\bar{n}$)
.05	.95	36	323
.025	.95	140	1290
.10	.95	10	81
.05	.99	61	557
.10	.99	16	140

Recall that m refers to the number of primary sampling units to be selected and since the first stage sampling is with replacement, a large institution may be selected more than once with a corresponding multiple of $\bar{n}$ samples taken from it (i.e., the number of sampled institutions will be $\leq$ m).

From the cost analysis, it is apparent that it is not feasible to select the required number of primary sampling units for the most stringent levels of reliability and precision. Of course, the actual between institution variance will very likely be considerably less than the maximum variance estimate used in the analysis and, therefore, the specified levels of reliability and precision can be realized with a considerably smaller m than the one listed. Reducing the variance to half the estimated maximum will result in a requirement for only half the stated value for m.

One the basis of the foregoing discussion and analysis, what are reasonable values for both m and $\bar{n}$? Until further information can be gained from the pilot study to improve upon the estimates of variance, a target value for m might be 25 with $\bar{n}$ equal to 50. Again, an institution with a large number of loans may be selected more than once for sampling and, therefore, the total number of institutions to be sampled will probably be less than 25. For each institution selected, 50 loans should be sampled, 100 if it is selected twice, etc. (If the marginal cost of inspecting an additional loan record for accuracy is small, it may be desirable to increase the $\bar{n}$ to a level such that a statistical statement of reasonable precision can be made regarding each institution sampled rather than the focus being on just the population of loans within the entire SMSA.)

Under some circumstances, it is possible to continue with further sampling if the sample drawn initially is not large enough to achieve the desired precision. As stated by Hansen, Hurwitz and Madow (Sample Survey Methods and Theory, Vol. I: Methods and Applications. New York: John Wiley & Sons, Inc., 1953. p. 79),

> "...Note that the increase of sample size under such conditions may sometimes result in a significant bias if the initial sample size is so small that it gives an unreliable estimate of the variance and the estimate of the variance is correlated with the estimate of the item. But if the initial sample size is large enough so that the estimate of the variance is subject to a coefficient of variation of no greater than, say, 15 percent, then one may be able to use this approach with reasonable assurance that if biases result, they will be small relative to the standard error of the sample estimate. Such a method will lead to an underestimate of the variance, but this bias is made small."

The coefficient of variation of any sample estimate is equal to the standard error of the estimate divided by the value being estimated--$s_{\hat{p}}/P$. Note that if $P = 0.7$, the standard error can be as large as 0.1 and still meet the guideline provided by Hansen, Hurwitz and Madow.

2.7 Sampling Mortgage Loan Records for Measurement of Data Aggregation Errors Procedure for Second-Stage Sampling

1. Identify each census tract in which a sampled institution has loans. Let R_i represent the number of census tracts for institution i.

2. Determine the number of loans for each census tract. Let $_tN_i$ represent the number of loans placed by institution i in census tract t.

3. Order the census tracts by number of loans.

4. Use systematic sampling to select a sample of 15 census tracts for audit.* Select for audit every K^{th} tract from the list where $k = R_i/15$.

5. Audit every loan in each of the 15 census tracts selected for institution i. (We need to review all loans in a census tract since we are measuring aggregation errors rather than sampling individual loan errors.)

6. Reconstruct the HMDA report line items corresponding to the 15 census tracts. Note classification errors by type of loan (FHA, VA, conventional, multi-family) and by type of error (misclassification, transcription, computational).

7. If statistical analysis of the measured data aggregation error rates yields estimates that are unacceptably high to the FHLBB and if the estimates are of insufficient precision, additional census tracts will be audited to estimate the nature and magnitude of these data aggregation errors more precisely.

8. Repeat steps 1 through 7 for each institution selected during first stage of sampling.

* Note: This sampling plan corresponds to the one originally proposed.

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APPENDIX B

RECOMMENDED PROCEDURES
FOR PHASE II ACCURACY AUDIT
AND PRETEST PLAN

FHLBB Contract # 677040
JRB Contract # 2-800-04-118-02

February 27, 1978

Submitted to

Federal Deposit Insurance Corporation
and
Federal Home Loan Bank Board

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
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DRAFT

TABLE OF CONTENTS

Page

1. INTRODUCTION 1

2. AUDIT PROCEDURES 5

3. PRETEST PLAN 15

4. REVISED WORKSHEETS 19

1. INTRODUCTION

This report provides information on the recommended audit procedures and pretest plan for Phase II, Accuracy. A separate companion report is also being submitted which addresses recommended procedures for cluster sampling with probability proportional to size. The relationship of these aspects of Phase II to each other, and to the remaining tasks in Phase II, is depicted in Figure 1.

The objective of Phase II is to estimate the accuracy with which the depository institutions are compiling their HMDA reports and to gather data on the methods, costs, and problems associated with the preparation of the report. This report describes the recommended procedures for auditing a sample of the depository institutions in the three SMSA's to estimate the degree of errors in geocoding (i.e., the incorrect assignment of a census tract to the address of the property) and for identifying aggregation and misclassification errors. These procedures will be used by JRB personnel in conjunction with FHLBB/FDIC examiners to obtain the information necessary to estimate the degree of accuracy in report preparation. In addtion, a survey will be conducted to determine the methods, costs, and problems associated with preparation of the HMDA report. This information will be used as the basis for several of the reports in Phase IV. JRB's original plan was to conduct only a limited pretest of the on-site audit procedures and survey methods. This pretest was to be done at one or two local depository institutions, and it was to be only a check on the workability of the data collection procedures. During the discussion of the detailed work plan, it was felt that this limited approach was not sufficient to test against the possible difficulties and problems that might be encountered in the various banks and savings and loans.

The new plan expands the pretest into a complete test of all audit, survey, and estimation procedures in three to six depository institutions in

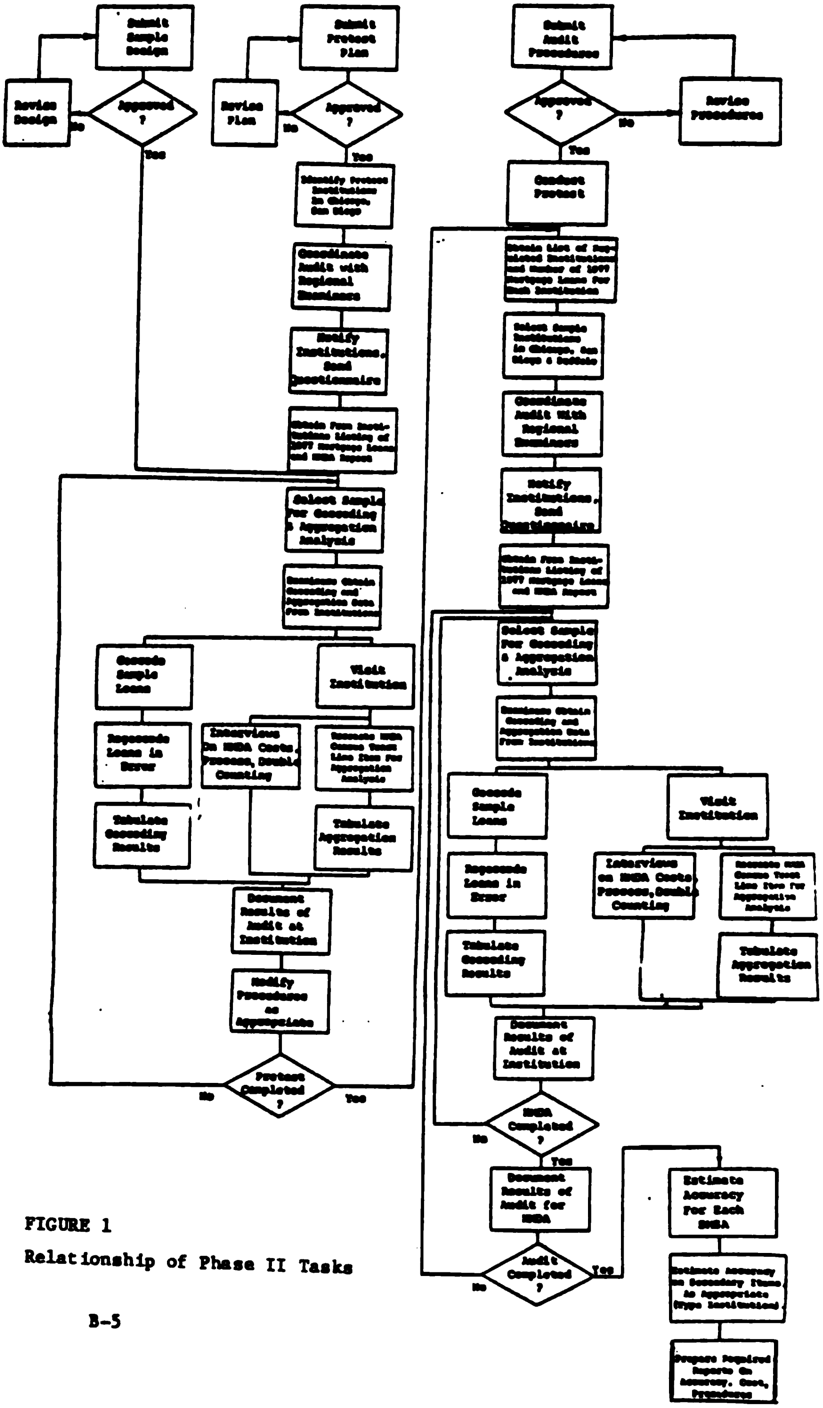
Submit Sample Design
Revise Design
Approved ?
No
Yes
Submit Pretest Plan
Revise Plan
Approved ?
No
Yes
Identify Pretest Institutions in Chicago, San Diego
Coordinate Audit with Regional Examiners
Notify Institutions, Send Questionnaire
Obtain From Institutions Listing of 1977 Mortgage Loans and HMDA Report
Select Sample For Geocoding & Aggregation Analysis
Examiners Obtain Geocoding and Aggregation Data From Institutions
Geocode Sample Loans
Visit Institution
Regeocode Loans in Error
Interviews On HMDA Costs, Process, Double Counting
Geocode HMDA Census Tract Line Item For Aggregation Analysis
Tabulate Geocoding Results
Tabulate Aggregation Results
Document Results of Audit at Institution
Modify Procedures as Appropriate
Pretest Completed ?
No
Yes
Submit Audit Procedures
Approved ?
No
Revise Procedures
Yes
Conduct Pretest
Obtain List of Pre-selected Institutions and Number of 1977 Mortgage Loans For Each Institution
Select Sample Institutions in Chicago, San Diego & Buffalo
Coordinate Audit With Regional Examiners
Notify Institutions, Send Questionnaire
Obtain From Institutions Listing of 1977 Mortgage Loans and HMDA Report
Select Sample For Geocoding & Aggregation Analysis
Examiners Obtain Geocoding and Aggregation Data From Institutions
Geocode Sample Loans
Visit Institution
Regeocode Loans in Error
Interviews on HMDA Costs, Process, Double Counting
Geocode HMDA Census Tract Line Item For Aggregative Analysis
Tabulate Geocoding Results
Tabulate Aggregation Results
Document Results of Audit at Institution
HMDA Completed ?
No
Yes
Document Results of Audit for HMDA
Audit Completed ?
No
Yes
Estimate Accuracy For Each SMSA
Estimate Accuracy on Secondary Items As Appropriate (Type Institution)
Prepare Required Reports On Accuracy, Cost, Procedures

FIGURE 1

Relationship of Phase II Tasks

a study SMSA's. This complete pretest will accomplish four important
rposes. First, it will reduce the risk of encountering serious problems
en the complete audit is conducted in the sample of 60 institutions.
condly, it will provide a preview of the results to be expected in the
timation of accuracy. Thirdly it will allow a refinement of the estimated
fort required to conduct the full accuracy audit. Fourthly, it will provide
d early indication as to whether or not these procedures and data can be
ed in other areas (i.e., Community Reinvestment Act, Civil Rights Settle-
nt).

During the pretest, the adequacy of the procedures used to gather data
d quantify the errors in the HMDA reports will be thoroughly tested on-site.
justments to the procedures will be made to eliminate the amount of trial-
-error time that would otherwise be expended during the conduct of the
mplete accuracy audit of 60 institutions. One critical aspect of the
curacy analysis yet to be completely resolved is the precise role of the
gional examiners in the identification and retrieval of pertinent data
om those institutions selected for audit.

The level of effort necessary by the institution in the preparation
the HMDA report and in responding to the audit will both be estimated in
rms of:

- number of personnel required
- number of person-hours required
- number of computer programs required
- amount of computer time required
- expected costs to each institution.

The pretest of three institutions will provide the FHLBB and the FDIC
th insight into the procedural and organizational problems associated with
diting the accuracy of the HMDA reports. Following the pretests, it will
possible to refine the estimated effort required to conduct the full
curacy audits. If the results of the initial three institutions are not
fficiently conclusive, up to three more institutions will be pretested.

The procedures assume that the following information would be provided to JRB by the FHLBB, the FDIC or the regional examiners:

1. For each SMSA, a list of all institutions required to report under the Act, and, for each, the number of mortgage loans made in 1977.
2. For each institution to be sampled, a copy of their 1977 HMDA report.
3. For each institution to be sampled, a listing, by loan number, of all mortgage loans made in 1977.
4. For each mortgage loan selected for geocoding analysis, a listing of the mortgage loan number, the complete property address (street, city, state, zip code) and the census tract.
5. For each of the 15 census tracts selected for aggregation analysis, an extract from the mortgage files of the following information on all loans (single family, multi-family, home improvement, and non-occupant): census tract, dollar amount of loan, type of loan (FHA, VA, FMHA, Conventional) home improvement indicator, non-occupant indicator, multifamily dwelling indicator, and originated or purchased indicator.

During discussions with the FHLBB, JRB has proposed that, whenever available, an automated listing of data necessary for the geocoding analysis be considered as *ground truth* for the purpose of this study, since the accuracy of the property address and loan number of selected mortgages on the computerized file is anticipated to be acceptable.

For the aggregation analysis, however, computerized data may not be acceptable as *ground truth*, and JRB has proposed that the examiners extract the information identified in item #5 above from the individual loan jackets, preferably by reproducing a copy of the loan agreement.

It has also been suggested that the visits by JRB to the institutions be coordinated with the institution's scheduled audit by the regional examiners. Whenever possible, JRB will attempt this coordination both during the pretest and during the complete audit.

2. AUDIT PROCEDURES

JRB will audit selected financial institutions in Chicago, San Diego, d Buffalo to obtain data on the processes and costs associated with the eparation of the HMDA Report. Information will also be obtained to rmit JRB to analyze the accuracy of geocoding and data aggregation dertaken during the preparation of these reports.

The procedures recommended by JRB to audit each institution are designed the sequential series of steps described below. These steps, may be rformed concurrently for several institutions within an SMSA, or, for that tter, concurrently for institutions in several SMSAs.

lection, Notification, and Survey

Step 1. The FDIC and the FHLBB will provide to JRB a list of the names all regulated institutions in Chicago, San Diego, and Buffalo required report under the Home Mortgage Disclosure Act as of December 31, 1977. addition, the FDIC and the FHLBB will provide to JRB the total number mortgage loans made by each of these institutions in 1977.

Step 2. Using the data provided by the FDIC and the FHLBB in Step 1, B will proceed to rank all institutions in each SMSA in descending order sed on the number of mortgage loans made in 1977. JRB will then randomly lect a number of institutions from each SMSA for inclusion in the study.

Step 3. JRB will provide the FDIC and the FHLBB with the list of stitutions to be sampled in Chicago, San Diego, and Buffalo. The FDIC l the FHLBB will contact the appropriate regional office to determine en these institutions are scheduled for audit. To whatever extent ssible within the time and resource constraints of the contract, JRB ll strive to coordinate our visit to the institution with that of the gional examiners.

Step 4. The FDIC and the FHLBB will prepare and send a letter to each selected institution to inform them of the purpose and scope of the HMDA study. Included with this letter will be a questionnaire, prepared by JRB, which solicits information on the procedures used by the institutions in the preparation of the HMDA Report, and the costs associated with this reporting requirement. A draft of this questionnaire will be submitted shortly for review. The institutions will be requested to complete the questionnaire and return it in the provided addressed and stamped envelope within two weeks.

Step [illegible]. The FDIC and the FHLBB, either through the regional examiners or from the institutions directly, will obtain for JRB a copy of the institution's 1977 HMDA Report (or appropriate state reports), and a listing, by loan number, of all mortgage loans made by the institution in 1977.

Step [illegible]. From the listing of all 1977 mortgage loans for each sampled institution provided by the FDIC and the FHLBB, JRB will randomly select* a number of loans for the geocoding analysis. A list of these loans will be provided to the FDIC and the FHLBB for each sampled institution. From the 1977 HMDA Report (or appropriate state reports) provided by the FDIC and the FHLBB for each institution, JRB will randomly select a number of census tracts for aggregation analysis. A list of these census tracts will also be provided to the FDIC and the FHLBB for each sampled institution.

[illegible]

Step 7. For each mortgage loan selected for geocoding analysis from the sampled institutions, the FDIC and the FHLBB, either through the regional examiners or from institutions directly, will obtain for JRB a listing of mortgage loan number, the complete property address to include number, street, city, state and zip code, and the census tract. For each census tract selected for aggregation analysis, the FDIC and the FHLBB, either through regional examiners or from the institutions directly, will obtain for JRB and extract from the mortgage files of the following information on ll loans (single family, multi-family, home improvement and non-occupant):

---

* See companion report, Recommended Procedures for Phase II Statistical Sample, dated February 17, 1978

- Census tract
- Dollar amount of loan
- Type of loan (FHA, VA, FMHA, Conventional)
- Home improvement indicator
- Non-occupant indicator
- Original or purchased indicator.

Step 8. Using the data provided by the FDIC and the FHLBB, JRB will ocode the address of each mortgage loan selected for geocoding analysis. accomplish this task, a JRB analyst trained in geocoding techniques will provided with only the mortgage loan number and address for all selected ans. Using address coding guides, metropolitan map series, tract outline ps and commercial street maps, as appropriate, this analyst will be structed to enter the desired census tract number for each address jacent to the loan number on the geocoding worksheet (Figure 2).

Step 9. When all loans for a sampled institution have been geocoded, e JRB accuracy task manager will compare the census tracts assigned to ch loan address by the institution to those derived in Step 8. Whenever e assigned census tract and the derived census tract disagree, the JRB curacy task manager will prepare a new geocoding worksheet, which will clude all census tract discrepancies for a specific institution. This rksheet will be given a differnet JRB analyst from the one that did the iginal geocoding, and these discrepancy loans will be regeocoded.

Step 10. The census tracts derived for loans regeocoded in Step 9 ll be compared with those assigned by the institution. Any census tracts ich, when regeocoded, agree with the census tract assigned by the institution will be considered correct. Any census tracts which, when regeocoded, sagree with the census tract assigned by the institution will be further mpared with the census tract derived in Step 8 by the first JRB analyst. both JRB analysts derived the same census tract, and this census tract ffers from the provided by the institution, the institution's assigned

GEOCODING FORM

INSTITUTION: ____________________

SMSA: ____________________

DATE: ____________________

LOAN NUMBER	CENSUS TRACT	ADDRESS	CITY	STATE	ZIP

FIGURE 2

census tract will be considered to be in error. Any three-way discrepancies, that is between the institution, the first JRB analyst and the second JRB analyst, will be reviewed by the JRB accuracy task manager.

Step 11. For each institution, a geocoding summary sheet will be prepared (Figure 3) which identifies the SMSA and the institution, and indicates the number of loans geocoded and the number of census tracts in error. All supporting documentation associated with each particular institution, such as listings and worksheets, will be attached to this summary sheet for permanent documentation.

Aggregation and Survey Followings

Step 12. After coordinating schedules with the examiners (Step 3), JRB will request that the FDIC and the FHLBB schedule site visits with each sampled institution. Prior to these site visits, JRB will have received and reviewed the completed questionnaires, received and reviewed the necessary aggregation data (Step 7), and, if possible, have completed the geocoding analysis (Steps 8-11).

Step 13. JRB will be represented by two staff members during each institutional site visit. The first order of business at each institution will be to meet with the appropriate officials of the institution to explain the purpose of the visit and to describe the activities already completed which concern that institution (Step 12). The primary data collection activity to be completed during the on-site interview is to review and finalize questionnaire information on HMDA report preparation and costs, and to solicit comments on the use of the HMDA reports and the perceived value of the legislation. One JRB person day has been alloted on each site visit for interviews and coordination.

Step 14. The availability of data required to complete the aggregation analysis remains a complex issue. Although 15 census tracts will be analyzed by JRB for each institution, the amount of raw data this represents will vary greatly from institution to institution. Because of the possible bulk of

GEOCODING SUMMARY SHEET

INSTITUTION: ____

SMSA: ____

NUMBER OF LOANS GEOCODED: ______________________

NUMBER OF LOANS GEOCODED INCORRECTLY: __________

PERCENT OF LOANS GEOCODED CORRECTLY: _________

FIGURE 3

is data in large institutions and the potential difficulty in retrieving
ta in non-automated institutions, one JRB person-day has been allotted
each site visit to resolve any problems encountered by the regional
miner in retrieving the necessary aggregation data for the 15 census
cts.

Step 15. For each institution, JRB will have randomly selected up to
census tracts from the HMDA Report, and the FDIC and the FHLBB, through
regional examiners or from the institution directly, will have obtained
provided to JRB, either in the form of reproduced source documents or an
regation data collection worksheet (Figure 4), all data necessary to
reate each of the 15 census tract line items. JRB will use a census tract
reation workshest (Figure 5), to record each loan for a given census tract.
t, JRB will use an aggregation error worksheet (Figure 6) to document for
h selected census tract, the type, and quantity of error identified during
comparison of JRB's work sheet with the institutions summary on the HMDA
ort. An aggregation summary worksheet (Figure 7), will be used to record
total errors associated with the aggregation analysis for all selected
sus tracts for the institution. These worksheets will be attached to the
data provided by the FDIC and the FHLBB and maintained as permanent
umentation.

ort

Step 16. When the site visit has been completed and both the geocoding
lysis and aggregation analysis are performed, JRB will prepare a brief
ort that documents the information on procedures, costs, and error rates
that institution.

Step 17. When all selected institutions in an SMSA have been audited,
will consolidate the reports prepared in Step 16 into an SMSA report.

Step 18. JRB will use the reports prepared in Step 16 and Step 17 to
lyze the accuracy of the HMDA data required under Task 2.3, and to prepare
relevant management reports required in Phase IV.

AGGREGATION DATA COLLECTION WORKSHEET

INSTITUTION: ______________________________

SMSA: ______________________________

CENSUS TRACT	LOAN AMOUNT	TYPE OF LOAN	HOME IMPROVEMENT	NON-OCCUPANCY	ORIGINATED/ PURCHASED	MULTI-FAMIL

FIGURE 4

CENSUS TRACT RECREATION WORKSHEET

INSTITUTION: ______________________

SMSA: ______________________

ORIGINATION OR PURCHASE: ______________________

CENSUS TRACT: ______________________

	FHA, FMHA OR VA LOANS, (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS [conventional] (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTAGE LOANS (except on multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)	
	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT
NT LS												

FIGURE 5

B-16

AGGREGATION ERROR WORKSHEET

INSTITUTION: ______________________________

CENSUS TRACT: ______________________________

SOURCE \ TYPE	A. FHA, FMHA OR VA LOANS (except on multi-family dwellings)		B. OTHER RESIDENTIAL MORTGAGE LOANS (Conventional) (except on multi-family dwellings)		C. TOTAL RESIDENTIAL MORTGAGE LOANS (except on multi-family dwellings)		D. TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		E. TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		F. NON-OCCUPANT LOANS (except on multi-family dwellings)	
	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT
HMDA Report												
Audit Totals												

TYPE OF ERROR	TOTALS	AMOUNT
1) Errors of Census Tract Assignment ______		
2) Errors of Computation ______		
3) Errors in Rounding $ ______		
4) Error of designation of loan as purchased or originated ______		
5) Errors in the designation of the type of loan ______		

LOAN COLUMN ON HMDA REPORT

ACTUAL COLUMN LOAN BELONGS IN	A	B	D	E	F
A	---				
B		---			
D			---		
E				---	
F					---

FIGURE 6
B-17

AGGREGATION SUMMARY WORK SHEET

INSTITUTION: ______________________

SMSA: ______________________

DATE: ______________________

CENSUS TRACT	TYPE OF ERROR									SUMMARY		
	ASSIGNMENT		COMPUTATION		ROUNDING		PURCHASED/ORIGIN		TYPE OF LOAN	NUMBER OF ERRORS	AMOUNT	
	NUMBER	AMOUNT	NUMBER	AMOUNT	NUMBER	AMOUNT	NUMBER	AMOUNT	NUMBER		CUMULATIVE	NET
TOTAL												

FIGURE 7

Personnel interviews will be conducted with appropriate officials in h pretest institution to clarify and expand the information furnished cerning HMDA processes and costs. During the interviews, JRB will also ermine the extent to which the pretest institution invests in purchased ns and participations. Details of the JRB approach to the double counting purchased loans was addressed in a work plan delivered to the FDIC and FHLBB on January 9, 1978.

The following steps must be taken to enable the pretest to begin:

Step 1: The FDIC and the FHLBB will contact the regional examiners in San Diego and Chicago and obtain the list of institutions scheduled for audit in the next 90 days.

Step 2: From the list of institutions identified in Step 1, the FDIC and the FHLBB will select a group of six institutions which encompass the following characteristics:

- A bank
- A federally chartered savings and loan
- A state chartered savings and loan
- A manual mortgage loan processing system
- A Chicago Federal Home Loan Bank Board client
- A California institution.

Step 3: The FDIC and the FHLBB, either through the regional examiners or from the institutions directly, will obtain a copy of the 1977 HMDA Report (or appropriate state reports) for each institution.

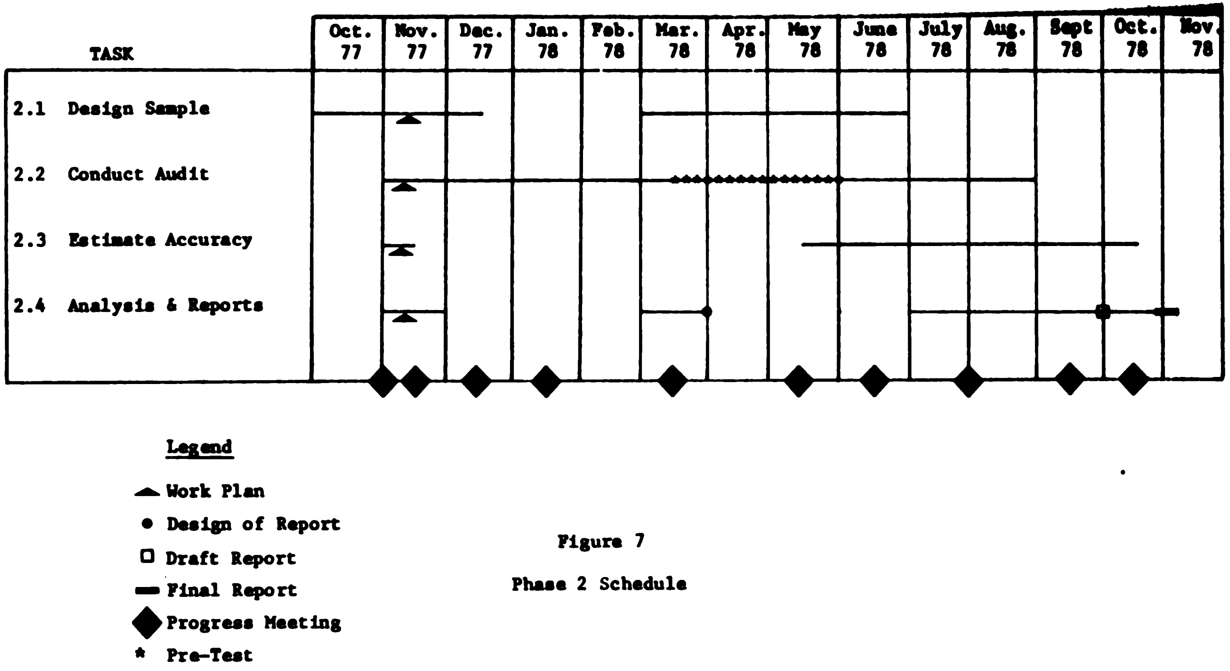

Figure 7

Phase 2 Schedule

4. REVISED WORKSHEETS

During the course of the study, several of the worksheets used to conduct the audits were revised. These revised worksheets are included in this section.

INSTITUTION: ____________________

SMSA: ____________________

ORIGINATION OR PURCHASE: ____________________

CENSUS TRACT: ____________________

FHA, FMHA OR VA LOANS (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS [Conventional] (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTGAGE LOANS (except on multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)		CONSTRUCTIONS 5 UNITS OR MORE	
NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT	NO	$ AMOUNT

APPENDIX C

FHLBB AND FDIC COST AND PROCEDURES QUESTIONNAIRE

Purpose: The Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation are jointly conducting a study to determine the procedures and costs associated with preparation of disclosure reports required under the Home Mortgage Disclosure Act. This study is intended to provide information to enable the FHLBB and the FDIC to assess methods and costs and to make improvements, where possible. The information provided in the study will be treated as confidential. It will be used only for statistical purposes and not released outside of the study.

INSTITUTION: ______________________________

ADDRESS: ______________________________

PERSON COMPLETING QUESTIONNARE: ______________________________

DATE: ______________________________

Responsibility: In the table below, please indicate the individual with overall responsibility for preparation of the HMDA report and also those individuals responsible, as applicable, for specific portions or activities.

Area of Responsibility \ Staff	Name	Title or Department	Phone
Overall			
Originations, Part A			
Purchases, Part B			
Home Improvement			
Geocoding			

Methods of Preparation: Please describe briefly the methods and/or steps by which the HMDA report is prepared. We are interested in the types of files used, whether the process is manual, automated, or both, and whether you only perform geocoding continuously or retrospectively when the report is prepared. If you have written procedures and wish to furnish them, please do so and skip this step.

Methods: ____

____

____

____

____

____

____

____

____

____

____

7. Uses of the HMDA Report: Please indicate the information below concerning the uses of the HMDA report.

   a. How many requests were made for the HMDA report in the past year? ________. By whom? ____________________

   ____

   ____

   ____

   b. Do you provide copying facilities for the HMDA report?

   Yes________ No________.

   c. Do you charge for copying? Yes________ No________.

   d. Do you feel that the report is useful? Yes________ No________.

   e. Could it be made more useful? If so, how?____________________

   ____

   ____

   ____

   f. How do you make depositors aware of the availability of the HMDA report? ____________________

   ____

   ____

   ____

   g. Where is the HMDA report available? ____________________

   ____

   ____

   ____

   h. Do you use census tract information for any purpose beside the preparation of the HMDA report? ____________________

   ____

   ____

   ____

5. Problems and Improvements: Please indicate the areas in which you have the most problems in the preparation of the HMDA report and/or areas in which you feel improvements can be made.

Definitions and Terminology in the Act:____________________________

____

____

____

Geocoding Tools and Methods: _________________________________

____

____

____

____

Categories of Loans to be Included: ____________________________

____

____

____

____

Other (Please specify): _____________________________________

____

____

____

____

____

6. **COSTS INCURRED IN THE PREPARATION OF THE HMDA REPORT:** Please complete the chart below, estimating the resources expended by your institution in the preparation of your latest HMDA report.

Labor Category	No. of Hours	Average Rate Per Hour	Total Cost ($)
Management/ Administrative			
Clerical			
Other(Specify)			
Other Costs			
Direct Costs for Internal Data Processing (Hardware/ Software)			
Service Bureau Costs, If Used			
Reproduction, Supplies, Postage, etc.			
Total Cost of Report Preparation			

Report preparation Activity	Cost ($)	Percentage of Cost
Data Gathering		
Geocoding Loans to Census Tract		
Preparation and Maintenance of Files		
Processing to Prepare Report		
Total		100%

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

METHODS TO IMPROVE GEOCODING ACCURACY

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

TABLE OF CONTENTS

Page

FOREWORD i

SUMMARY iii

1. INTRODUCTION 1-1
   1.1 Purpose 1-1
   1.2 Scope and Methodology 1-1
   1.3 Contents of This Report 1-3

2. THE GEOCODING PROCESS 2-1
   2.1 Address Capture Stage 2-3
      2.1.1 Designation of an Incorrect Place Name 2-3
      2.1.2 Incorrect Spelling of Street or Place Names 2-4
      2.1.3 Omission of Street Numbers 2-4
      2.1.4 Omission of a Street, Road, or Lane Designation . . 2-4
      2.1.5 Omission of Zip Code 2-5
      2.1.6 Rural Route and P.O. Box Addresses 2-5
      2.1.7 Illegible Handwriting 2-5
   2.2 Census Tract Assignment 2-6
      2.2.1 Geocoding Tools 2-6
      2.2.2 Geocoding Staff 2-10
      2.2.3 When Are Census Tracts Assigned 2-12
   2.3 Census Tract Capture and Editing Stage 2-12
   2.4 Census Tract Storage Stage 2-13

3. GEOCODING ACCURACY RESULTS FOR THE BUFFALO, SAN DIEGO, AND CHICAGO SMSAS 3-1
   3.1 Geocoding Accuracy in the Buffalo SMSA 3-1
      3.1.1 The Study Sample 3-1
      3.1.2 The Results of the Geocoding Accuracy Audit . . . 3-2
      3.1.3 Discussion of Buffalo Results 3-3
   3.2 Geocoding Accuracy in the San Diego SMSA 3-5

TABLE OF CONTENTS (Cont'd)

Page

3.2.1 The Study Sample 3-5
3.2.2 The Results of the Geocoding Accuracy Audit . . . 3-5
3.2.3 Discussion of San Diego Results 3-6
3.3 Geocoding Accuracy in the Chicago SMSA 3-6
3.3.1 The Study Sample 3-6
3.3.2 The Results of the Geocoding Accuracy Audit . . . 3-8
3.3.3 Discussions of Chicago Results 3-9
4. RECOMMENDATIONS TO IMPROVE GEOCODING 4-1
4.1 Education 4-2
4.2 Interaction Among Departments 4-3
4.3 Tools 4-3
4.4 Procedures 4-4
References. R-1

LIST OF TABLES AND FIGURES

Page

Table S.1: Geocoding Accuracy for All Institutions in Buffalo, Chicago, and San Diego iv
Table S.2: Geocoding Accuracy iv
Table 3.1: Geocoding Accuracy for All Institutions in the Buffalo SMSA 3-2
Table 3.2: Comparison of Type of Disclosure Statement, Geocoding Methods, and Accuracy Achieved 3-4
Table 3.3: Geocoding Accuracy for All Institutions in the San Diego SMSA 3-6
Table 3.4: Comparison of Type of Disclosure Statement, Geocoding Methods, and Accuracy Achieved 3-7
Table 3.5: Geocoding Accuracy for All Institutions in the Chicago SMSA 3-9

LIST OF TABLES AND FIGURES (Cont'd)

Page

Table 3.6: Comparison of Type of Disclosure Statement, Geocoding Methods, and Accuracy Achieved 3-10

Table 4.1: Geocoding Accuracy 4-1

Figure 2.1: Stages of Geocoding 2-2

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC) under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

---

*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of this report is to assess the methods currently used by depository institutions in the geocoding of residential property addresses to census tracts and to suggest methods for improving this process.

SCOPE AND METHODOLOGY

The first stage of this part of the study was to identify and document the methods and procedures currently used by depository institutions to geocode property addresses to census tracts. This stage was performed during the Accuracy phase of the overall study by means of on-site visits at 44 depository institutions located in Chicago, Buffalo, and San Diego. Current procedures were investigated in terms of the four sequential steps associated with geocoding: address capture, census tract assignment, census tract capture and editing, and census tract storage. In the second stage of this study the methods and procedures used by the various depository institutions were considered in light of the accuracy with which geocoding was performed. This analysis provided insights into those methods and procedures which produce accurate geocoding and those which do not. Finally, based upon this analysis and upon additional information provided by representatives of the Bureau of Census, the regulatory agencies, and the depository institutions, suggestions were developed for methods to improve the accuracy of geocoding.

FINDINGS

Using the data collected on geocoding in the three SMSAs and the statistical procedures developed in the Accuracy phase of the study, a statistically valid estimate of the geocoding accuracy of the institutions in each of the three SMSAs was derived.[1] The geocoding accuracy results for the three SMSAs, expressed in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval, are shown in Table S.1.

TABLE S.1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN BUFFALO, CHICAGO, AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
Mean Percentage of Accuracy	93.16	92.05	82.27
Standard Percentage of Error	1.51	1.49	3.11
95 Percent Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

The results of the analysis of geocoding accuracy show that depository institutions in the Buffalo and San Diego SMSAs are achieving acceptable geocoding accuracy levels, but that approximately 35 percent of the depository institutions in the Chicago SMSA are achieving unacceptable accuracy levels below 80 percent. These results are summarized in Table S.2.

TABLE S.2: GEOCODING ACCURACY

SMSA	Number of Institutions Sampled	Accuracy ≥ 80% Number	Accuracy ≥ 80% Percent	Accuracy ≥ 85% Number	Accuracy ≥ 85% Percent	Accuracy ≥ 90% Number	Accuracy ≥ 90% Percent
Buffalo	8	8	100	7	87.5	6	75
Chicago	26	17	65	16	61.5	13	50
San Diego	10	10	100	10	100	7	70
Total	44	35	79.5	33	75	27	61

These results, when compared to the accuracy ratio of 50 percent for geocoding data contained on Form A of the Fair Housing Information Survey, indicate that significant improvements in geocoding accuracy have been achieved in the last several years. Although most depository institutions have virtually mastered the geocoding process, many have not. Using procedures outlined in the companion report "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements,"[3] these institutions attaining below 80 percent accuracy can be identified. Once identified, and with the implementation of proper procedures and reference tools, these institutions can be brought up to an acceptable level of geocoding accuracy.

Prior to the promulgation of the Home Mortgage Disclosure Act and Regulation C, most depository institutions did not employ census tracts for any internal use. For this reason, the staff of these institutions were unfamiliar with both the concept of census tracts and the actual practice of geocoding. The initial impact on depository institutions of the requirement that loans be geocoded by census tracts was substantial in terms of learning the concepts and appropriate reference tools and in implementing the necessary modifications to procedures and loan files. This initial impact has largely subsided and, today, the geocoding of property addresses to census tracts is not a major problem in most institutions. Still, substantial improvements in geocoding procedures and accuracy could be achieved in at least 20 percent of the depository institutions by means of the steps outlined in this report. As regards overall disclosure statement accuracy however, the maintenance of adequate controls in the recording of the assigned census tracts and in the translation to files used to aggregate disclosure tatements appears to be a more prevalent problem. The results of the accuracy analysis indicate many instances of high error rates associated with aggregating loans in an inappropriate census tract even where the institution's geocoding accuracy itself is relatively high.[1] The verification methods outlined in this report would serve to reduce this problem.

Use of Proper Geocoding Tools: The most significant improvement in geocoding accuracy can be achieved by ensuring that depository institutions use the most effective tools available. Various resources and tools are available to assist depository institutions in the efficient and accurate identification of correct census tracts. Despite this fact, numerous institutions contacted in the study, particularly commercial banks, were unaware of the availability of the most effective of these tools Address Coding Guides. This lack of information is particularly noteworthy in light of the fact that several Address Coding Guides are available for each SMSA. In addition, the study found that different departments within the same institution would often utilize different geocoding tools Frequently this was due to a simple lack of communication between, for example, mortgage loan and consumer loan departments Often these different methods would result in appreciably different levels of geocoding accuracy.

Maintenance of a Loan Listing for Verification Purposes: Geocoding accuracy could be improved if depository institutions were required to maintain a listing of the loans with the property addresses and corresponding census tracts to which they were assigned. This loan listing should include all of the loans in particular disclosure statement This would provide a means by which institution personnel and regulatory examiners could verify geocoding accuracy. Presently, geocoding is seldom reviewed, edited, or verified, once it is completed. Institutions using automated procedures for geocoding often submit an extract of the mortgage master file to a service bureau, and receive in return, a generated copy of the required disclosure statement. Typically, they receive no printout correlating individual property addresses to census tracts which could later be reviewed as part of a scheduled compliance examination.

Examination Procedures: Examination procedures that address three aspects of geocoding could improve accuracy. First, the procedures should ensure that the best available geocoding tools are being used. When inappropriate tools -- such as census tract outline maps -- are being used, the use of more appropriate tools such as Address Coding Guides should be suggested.

Secondly, the procedures should determine whether proper methods are used in geocoding both mortgage loans and home improvement loans. If inappropriate tools are being used in either case, the use of an appropriate geocoding tool should be suggested. Finally, a sample of loans should be selected from the loan listing and the accuracy with which these loans were geocoded should be assessed.

Education: Providing background information to depository institution personnel on the definition of census tracts, factors which govern their creation, and the purpose for reporting loans by census tracts would improve geocoding accuracy. Despite the passage of HMDA in 1975 which required that disclosure statements be prepared and organized by census tracts, the staff of some institutions remain uninformed about the meaning of census tracts or the relationships between census tracts and available demographics. This lack of knowledge is particularly noticeable as it concerns the minimum duration of census tract boundaries (ten years), and the requirement that property addresses be identified with a specific census tract rather than one that provides an approximate location of the property.

CHAPTER 1

INTRODUCTION

1.1 PURPOSE

The purpose of this report is to assess the methods currently used by depository institutions to assign census tracts to residential addresses and to suggest methods for improving this process.

1.2 SCOPE AND METHODOLOGY

The preparation of a disclosure statement involves both data and procedures. The data required for disclosure report preparation includes a complete and accurate property address (street number, street, city, state, zip code) the correct census tract, the dollar amount of the loan rounded to the nearest thousand, the type of loan (FHA, VA, FmHA, Conventional), a home improvement loan indicator, a nonoccupant indicator, a one-four family unit indicator, multifamily indicator, and an originated or purchased indicator. Procedures for disclosure reports must address the areas of data identification, capture, storage, retrieval, aggregation, and verification in future compliance examinations. This report addresses the geocoding aspect of mortgage disclosure report preparation. In terms of data, the report addresses the location of the property and the identification of the census tract. In terms of processes, the report addresses the capture, geocoding, editing, and storage of the data.

As defined in the County and City Data Book, 1972, "Census tracts are small areas into which large cities and their adjacent areas have been divided for statistical purposes. Tract boundaries were established cooperatively in each Standard Metropolitan Statistical Area (SMSA) by local committee and the Bureau of the Census and were generally designed to achieve some uniformity of population characteristics, economic status, and living conditions. The average tract has about 4,000 residents."[4] Thus, the census tracts currently used for disclosure purposes rely on data from the 1970 census. Because of shifting demographics in the United States, particularly in Standard Metropolitan Statistical Areas, the data obtained during the 1980 census will undoubtedly alter the composition of existing census tracts.

Geocoding involves nothing more than a determination of the census tract, if any, in which a property is located, and then recording this finding so that the tract can be related to the property address for purposes of analysis, disclosure report preparation, or compliance examination. The objective of this part of the study was to identify and document geocoding procedures used by mortgage departments and consumer loan departments, as well as ascertain the electronic data processing tools used to correlate property addresses to census tracts. Mortgage departments it was found, were primarily responsible for processing residential mortgage loan originations; consumer loan departments processed home improvement loans; and electronic data processing encompassed both internal report preparation and institutional staff interaction with service bureau personnel.

The geocoding procedures used by depository institutions are of two types: manual and automated. Geocoding is performed either continually as loans are originated, or retrospectively during preparation of the disclosure statement at the end of the reporting year. The scope of this report includes analysis of both manual and automated procedures conducted on both a continual and retrospective time frame.

Data on geocoding were obtained during Phase II, Accuracy, of the present study. The data on geocoding methods were obtained through a questionnaire distributed to 44 randomly selected institutions in Buffalo, Chicago, and San Diego. The information obtained from the questionnaires was then verified and amplified during on-site visits conducted at each of the 44 sampled institutions. Discussions concerning census tracts, demographics, and geocoding were also held with the staff of the FHLBB, the FDIC and the Bureau of the Census. All of this information was analyzed and synthesized by JRB and formed the basis of the recommendations on ways to improve geocoding accuracy.

Data on the levels of geocoding accuracy obtained by institutions in the three SMSAs were obtained during audits conducted on-site at the 44 institutions. The methodology used in selecting institutions to be sampled and in conducting the audits are developed in detail in a companion report, "Accuracy of Disclosure Statement Preparation."[1] Also presented at length in that report are detailed findings on the results of the geocoding accuracy audits. Included in this report is a summary and discussion of the geocoding accuracy findings from Buffalo, Chicago, and San Diego. This information gives insight into the magnitude of the problems associated with geocoding accuracy as well as the impact of various geocoding methods on the level of accuracy obtained.

1.3 CONTENTS OF THIS REPORT

The remaining portions of this report are presented in three chapters. Chapter 2 documents procedures currently in use by depository institutions to assign census tracts to residential properties. In addition, it identifies problems associated with these procedures which ultimately result in inaccurate disclosure statements. Chapter 3 presents a summary of the results of the geocoding accuracy audits in the three SMSAs. These results are presented separately for each SMSA studied and give insight into the impact of various geocoding methods on the level of accuracy obtained. Chapter 4 presents practices which can be used by mortgage loan departments, consumer loan departments, and the data processing staff of financial institutions to improve the accuracy of the geocoding process.

CHAPTER 2

THE GEOCODING PROCESS

In this chapter, the geocoding process is analyzed in terms of the following four stages: (1) address capture, (2) census tract assignment, (3) census tract capture and editing, and (4) census tract storage. Figure 2.1 depicts a schematic representation of these four stages.

The first stage, address capture, involves recording property address data for loans requiring geocoding. Address capture typically occurs at the time a loan application is submitted. Section 2.1 details the address capture stage and identifies potential problem areas associated with it.

The second stage, census tract capture, involves the use of geocoding tools to assign a census tract number to a specific property address. This assignment is the most complex stage of the overall geocoding process. This stage is defined by the geocoding tools used, the qualifications of the staff, and whether geocoding is performed on an ongoing basis or once at the end of the year. Section 2.2 describes this stage in detail.

The third stage, census tract capture and editing, involves recording and editing census tract assignments for subsequent aggregation and disclosure statement production. Section 2.3 describes the census tract capture and editing stage in detail.

The fourth stage, census tract storage, involves establishing and maintaining the link between a specific address and the census tract to which it has been assigned. Section 2.4 describes the census tract storage stage in detail.

Our experience and analysis indicates that the procedures utilized during each of these four stages have an effect on the accuracy of the geocoding process and the resulting accuracy of the annual disclosure statements. The problems associated with each stage that were identified during the Accuracy phase of the study are discussed in the following sections.

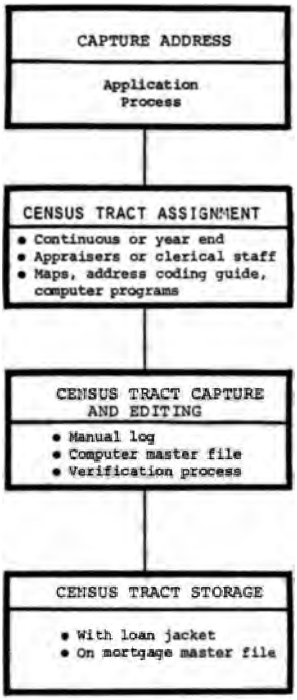

FIGURE 2.1: STAGES OF GEOCODING

2.1 ADDRESS CAPTURE STAGE

The recording of address data is the foundation of the geocoding process. Indeed, the subsequent geocoding process can be accurate only if the address data recorded during this initial stage are complete and precise. To ensure accurate geocoding, the correct and complete property address must be recorded at the time an application is made.

Our analysis of geocoding isolated seven aspects of the address capture process which may result in an inaccurate outcome to the geocoding process. These are:

- Designation of an incorrect place name (e.g., borough, town, village)
- Incorrect spelling of street or place names
- Omission of street numbers
- Omission of a street, road, or lane designation
- Omission of zip codes
- Rural route and P.O. box addresses
- Illegible handwriting.

Each of these aspects will be discussed in turn.

2.1.1 Designation of an Incorrect Place Name

The designation of an improper place name can result in the assignment of an incorrect census tract or the rejection of the address as incorrect. In some instances, individuals specify an incorrect place name to gain added prestige through association with more exclusive community. When such a situation occurs, zip codes can be useful during geocoding in determining the correct place name. In an automated geocoding system, however, the address will be rejected as incorrect.

2.1.2 Incorrect Spelling of Street or Place Names

The incorrect spelling of a street name can result in an incorrect assignment of a census tract and, thus, an inaccurate outcome of the geocoding process. This situation typically occurs when two or more street names have similar spellings. When this happens, the omission of a letter, the inclusion of an extra letter, or the transposition of a group of letters, may alter the spelling of a street name sufficiently to cause its spelling to resemble or be mistaken for a second street name. This situation can result in the assignment of an improper census tract, or force the geocoding staff to make an "educated guess" as to the proper census tract assignment. Once again, zip codes can be useful when this situation occurs. If the streets in question have different zip codes, the correct street name can be determined from the zip code.

A related problem involves automated geocoding systems which are programmed to assign census tracts to correctly spelled street and place names. The incorrect spelling of a street address or place name will result in the rejection of the address by the automated system.

2.1.3 Omission of Street Numbers

The omission of a street number in an address can result in the incorrect assignment of a census tract when a street intersects or becomes a census tract boundary. When this occurs street number ranges become the only data available for accurately identifying census tracts. In such a situation, the omission of street numbers can result in the incorrect assignment of a census tract or force the geocoding staff to make an "educated guess" as to the correct census tract assignment.

2.1.4 Omission of a Street, Road, or Lane Designation

The omission of a street, road, or lane designation in an address can result in the incorrect assignment of a census tract and inaccurate outcome of the geocoding process. This can occur when two or more street names are similar, differing only in their street, road, or lane designation.

When this occurs, the omission of a street, road, or lane designation makes it difficult to determine the precise address that corresponds to the subject property. Again, zip codes can be useful in dealing with such situation. If the addresses in question have different zip codes, the correct address can be determined by the zip code.

2.1.5 Omission of Zip Code

The omission of a zip code in an address can result in an incorrect census tract assignment when one or more of the other address components are incorrect or incomplete.

2.1.6 Rural Route and P.O. Box Addresses

Rural route and P.O. Box addresses pose a unique problem in the geocoding process. A rural route address recorded for geocoding purposes will be rejected by an automated system. Geocoding tools currently in use do not provide census tract data for rural routes. It is not possible, therefore, to geocode rural route addresses with conventional geocoding tools. If, however, the geocoding staff is comprised of appraisers, it becomes possible to geocode the address. The appraiser can note the correct street address and location at the time of the property appraisal. Thus, a complete and accurate street address must be recorded in addition to the rural route address to avoid rejection of the rural route address. When a complete and accurate street address is not available, geocoding should be performed by an appraiser at the time of property appraisal.

2.1.7 Illegible Handwriting

Illegible handwriting can result in the incorrect assignment of a census tract and, thus, an inaccurate outcome of the geocoding process when the geocoding staff cannot identify all the letters and/or numbers of the captured address. When this occurs the geocoding staff must make an "educated guess" as to the letters and number of the address. This can result in the incorrect assignment of a census tract.

2.2 CENSUS TRACT ASSIGNMENT

Census tract assignment, the second stage of the geocoding process, involves the use of geocoding tools which enable the geocoding staff to assign a census tract number to a specific property address. This stage is defined by three aspects: geocoding tools geocoding staff, and the time frame for geocoding. Geocoding tools can be either manual or automated. The staff responsible for geocoding can be made up of a corporate officer, loan officers, appraisers administrative assistants, or clerks. Geocoding can be performed on a continuing basis or retrospectively. Our analysis in Phase II, Accuracy, indicates that these three components and their various alternatives have an impact on the accuracy with which census tracts are assigned to addresses.

2.2.1 Geocoding Tools

Geocoding tools contain census tract and address data which enable a geocoding staff to assign a census tract number to an address. Geocoding tools are of two types: manual and automated. Manual geocoding tools include Address Coding Guides and Census Tract Maps. Automated geocoding tools utilize a set of computer programs to assign census tract number to a given address. Automated geocoding tools include in-house computer programs and service bureau computer programs. The following sections discuss the various types of geocoding tools in relation to their availability, quality, and cost.

The Bureau of the Census has developed several manual and automated geocoding tools. These tools include Census Tract Street Indexes the automated geocoding system ADMATCH, and Census Tract Outline Maps. The Census Tract Street Indexes and ADMATCH are available only for the urbanized areas of each SMSA. The Census Tract Outline Maps are also an inappropriate geocoding tool because they do not contain detailed street data. Census Tract Outline Maps depict only major roads, state and county divisions, and census tract boundaries.

Since materials provided by the Bureau of Census are not appropriate for geocoding, institutions must rely on the commercial geocoding tools available in their relevant SMSAs. The number and type of adequate geocoding tools available for each SMSA, therefore, will depend upon the commercial tools developed for a given SMSA. A number of commercial firms market geocoding tools on a national basis. There are also a number of commercial firms and local planning departments which produce geocoding tools for a limited number of SMSAs.

Address Coding Guides: Address Coding Guides (ACGs) provide detailed census tract and address data in an efficient, well-organized, and easy-to-use format. ACGs are available for all SMSAs. There are a number of ACGs marketed by commercial firms and various local planning groups. The most widely used ACG is the Savings Institutions Management Sciences, Inc. (SIMS) ACG which is prepared by Ruben H. Donnelly, Inc.[5] SIMS markets ACGs for every SMSA. SIMS is affiliated with the U.S. Savings League.

The SIMS ACGs are comprised of three sections:

- The Place Name Cross Index
- The Index of Zip Codes
- The Census Tract Coding Directory

The ACC explains how town and place names are to be found in the guide. It states, "There are hundreds of places and towns throughout the country which will not appear in the Census Tract Coding Directory because they belong to larger towns which have been designated by the Post Office departments as the 'official town name. The Place Name Cross Index refers your town name to the 'official town name which will be located in the Census Tract Coding Directory."[6] "The 'Index of Zip Codes' provides a list of zip codes to be found in the SMSA. This Index will allow the user to determine which city or town within the Directory will include addresses for any particular zip code."[7]

The Census Tract Coding Directory organizes an SMSA alphabetically by county. Within each county, the "official" cities or towns designated by the Post Office are listed; and, for each of these, the streets, roads, and lanes are ordered alphabetically and by numerical range. ACGs also provide zip code data for each place and numerical street range.

The detailed data of the Place Name Cross Index, Index of Zip Codes, and Census Tract Coding Directory contained in Address Coding Guides, and the availability of these tools make ACGs the most precise and easy-to-use manual geocoding tool presently available. ACG data are not, however, updated at frequent intervals. This creates difficulties for geocoding loans made on properties located on new streets or in new developments. Many ACGs produced on a national basis have not been updated since 1975 or 1976. This means that any streets or developments constructed after 1975 or 1976 will not be included in the ACG. This factor will decrease the number of addresses in a growing SMSA which can be successfully geocoded.

The cost of ACGs vary depending upon whether the ACG is marketed by a national firm or a local planning department. The SIMS ACGs are available at a cost of $70 for each SMSA, with several exceptions, including New York and Chicago, which are each $115. The cost of local planning ACGs varies between SMSAs from $15 to $100.

Census Tract Maps: Census Tract Maps (CTMs) provide census tract and address data in the form of detailed street maps. No census tract maps are marketed on a national basis. CTMs are available, therefore, only in SMSAs where a local planning group or commercial firm has prepared a CTM.

Of the three SMSAs involved in this study, the San Diego SMSA was the only SMSA in which CTMs were available and used extensively as a geocoding tool. Thomas Brothers Maps provides detailed and complete CTMs for counties in California.[8]

Thomas Brothers CTMs are comprised of three sections: the Cities and Communities Index, Street Index, and Census Tract Maps. The Cities and Communities Index lists the communities within an SMSA, the post office which serves each community, and its zip code. The Street Index organizes a county's streets alphabetically. It also lists the post office zone, block number, page number, and grid number associated with each tract. CTMs provide detailed street maps which include the census tract boundaries of the SMSA.

Thomas Brothers CTMs are updated annually. Consequently, they contain the most recent and complete set of census tract data of any manual geocoding tools encountered in the three SMSAs Thomas Brothers CTMs, however, do not contain adequate numeric street address ranges. These are important in assigning census tract numbers when a street intersects or becomes a census tract boundary. Inadequate numerical address ranges can result in the incorrect assignment of a census tract.

Thomas Brothers CTMs are marketed on a county basis. The cost of Thomas Brothers CTMs is $15 per county.

Automated Geocoding Tools: Geocoding can also be performed by computer programs designed to assign census tracts to specific property addresses. There are a number of commercial firms and service bureaus which provide computerized geocoding services in addition to in-house computerized geocoding.

The majority of automated goecoding tools have as their foundation a set of computer programs called ADMATCH. These programs were developed by the Census Bureau and have as their purpose to attach geographic codes to automated records containing street addresses. According to the Bureau of Census, the ADMATCH system replaces the clerical "look-up" process by "comparing the individual address to a geographic reference list...and assigning the appropriate geographic codes to those records meeting the comparison criteria."[9] ADMATCH contains census tract data only for urbanized areas. Census tract data for nonurbanized SMSA areas, therefore, must be added to ADMATCH in order to create an automated file capable of geocoding a complete SMSA.

The quality of the census tract data for nonurbanized areas, and the frequency with which it is updated, varies with the automated file used. Some national firms, such as Urban Data Systems, are capable of geocoding any SMSA in the country. Most automated systems, however, are only capable of geocoding an individual SMSA or SMSAs within one state.

Automated geocoding tools are useful for geocoding completed and correct address records which meet the comparison criteria stated in Section 2.1. There are, however, several types of incorrect and/or incomplete data which can cause an address record to be rejected from an automated geocoding system because the address fails to meet the comparison criteria of the computer programs. Incorrect and/or incomplete data which will not meet comparison criteria are:

- Designation of an incorrect place name
- Incorrect spelling of street or place names
- Omission of street numbers
- Omission of a street, road, or lane designation
- Rural route and P.O. Box addresses.

When an address record contains one or more of these five types of data errors, it will be rejected as an error. These rejected address records must then be manually geocoded by the institution.

The cost of automated goecoding is difficult to assess because it varies with each institution and method of automation. Institutions large enough to utilize in-house geocoding software an depreciate the cost over several years. Still, these institutions do incur costs associated with updating programs when adding new street names and address ranges. For institutions using a service bureau the actual cost of geocoding is also difficult to assess. This is because these institutions are frequently presented with a bill for a variety of automated services of which geocoding is only one component.

2.2.2 Geocoding Staff

The primary duty of the geocoding staff is to assign census tract numbers to property addresses. Larger staffs are required when manual rather than automated geocoding procedures are employed. This section discusses the type of personnel involved in geocoding and discusses the benefits and limitations associated with each type of staff.

Corporate officers and loan officers in some depository institutions participate directly in the geocoding process either during the application stage, or subsequently when the disclosure statement is being prepared. In addition, they often assist other staff members in geocoding addresses not contained in the Address Coding Guide. Corporate and loan officer involvement in geocoding is advantageous because these individuals are usually quite familiar with the towns and streets in the SMSA. Unfortunately, their involvement in geocoding is frequently limited due to other commitments.

Appraisers can geocode accurately since they have the advantage of being physically present at the property location. Appraisers typically complete a detailed appraisal form on each property, and census tract assignment is often one of the required data elements. Their direct knowledge of property is extremely valuable in cases where an address is not included in the Address Coding Guide. In addition, appraisers can assist others involved in geocoding by verifying or completing an incomplete property address so that it can be found in an Address Coding Guide.

Clerical staff such as clerks, secretaries, and temporaries are often used to perform geocoding. The key factor associated with the clerical staff is the level of their knowledge of the SMSA and the extent of their training in geocoding techniques. Clerical staff often do not achieve the level of geocoding acccuracy attained by managers and appraisers. There are four major reasons for this discrepancy:

- Clerical staff have a high turnover rate, and may lack geocoding experience and familiarity with geocoding tools
- Clerical staff may not be familiar with street locations in the SMSA
- Clerical staff do not make on-site visits to the property and, therefore, cannot by themselves correct or complete address data needed to ensure accurate geocoding
- Temporary clerical staff have neither geocoding experience nor familiarity with geocoding tools.

Without adequate experience, training and motivation, the clerical staff will view geocoding as a mechanical burden, and they will not achieve results comparable to a trained and motivated staff.

2.2.3 When Are Census Tracts Assigned

The geocoding of a census tract to a property address is sometimes performed continuously as loans are applied for or granted, while in other cases it is performed retrospectively at year end as part of the preparation of the disclosure statement. Continuous geocoding normally involves the use of manual tools and may involve managers, appraisers, or administrative staff.

Retrospective geocoding involves procedures for assigning census tracts at specific intervals, such as end of month or end of year. Manual or automated geocoding tools can be utilized when geocoding is performed retrospectively. Although management and clerical staff — particularly temporaries — are utilized for retrospective geocoding, our survey found no instances of appraiser involvement in these procedures.

2.3 CENSUS TRACT CAPTURE AND EDITING STAGE

Once census racts are assigned to property addresses, several different methods are used by depository institutions to perform the third stage of geocoding, census tract capture and editing. For the present purposes, census tract capture is defined to include the initial recording of the address and its assigned census tract and the subsequent transfer of these dat to whatever manual logs file folders, or automated systems are employed by the depository institution. Editing involves the comparison of addresses and assigned census tracts against specified validation criteria such as valid lists of census tracts, SMSA codes, county codes, or numerical limits for census tracts within an SMSA.

When geocoding is performed continuously and manually, addresses and census tracts may be initially recorded on loan application forms, appraisal forms, or loan application register. When geocoding is performed retrospectively and manually, census tracts are initially recorded on work sheets. When geocoding is performed by automated means, the initial recording of assigned census tracts is made on a computer file for those addresses that can be assigned by automated means. Those addresses which cannot be assigned census tracts by automated means must be geocoded manually, and the initial assignment is typically recorded on a work sheet.

When manual geocoding methods are used, the two problems associated with the initial recording are illegibly handwritten census tract assignments and incorrectly recorded numbers. Additional errors can be introduced during the transfer of these initially recorded data to other manual logs or forms or by data entry into a computer. Editing of these manual methods is seldom performed. Institutions which employ automated mortgage files do typically edit census tract assignments as a routine part of their automated procedures. Such automated edits vary by institution. These do not ensure that all assignments are correct but they typically do reject census racts not on a valid list or outside the numerical range for the SMSA. Errors found during this process are corrected. However, instances were found where no attempt was made to correct the census tract assignment first recorded.

2.4 CENSUS TRACT STORAGE STAGE

The fourth stage, census tract storage, involves the retention of specific property addresses and their corresponding census tract numbers to permit preparation and verification of the disclosure statement These data are frequently correlated either in the loan jacket or the mortgage master file. Proper storage and retrieval procedures are needed to enable the institution to efficiently aggregate loans within the same census tract during the preparation of the disclosure statement. Proper storage procedures are also needed for the institution personnel and examiners to verify the accuracy of the geocoding.

The loan jackets and the mortgage master file include loans that were originated or purchased in more then the current fiscal year; whereas, the disclosure statement includes only those loans that were originated or purchased in a given fiscal year. This requires the data for the relevant fiscal year to be retrieved by manual or automated means.

A significant current shortcoming is that most depository institutions do not maintain a listing of the loans that were selected for inclusion in a disclosure ropert. Such a loan listing should include, among other items, the addresses and their assigned census tracts to permit a verification of the accuracy of the geocoding. Without such a loan listing, it is virtually impossible for the institution personnel or an examiner to verify the geocoding accuracy. A related problem concerns depository institutions which utilize a service bureau to both geocode loans and to generate the required disclosure statement. If the depository institution merely provides the service bureau with an extract of the mortgage master file reflecting annual mortgage activity, and simply receives a copy of a disclosure statement, no record correlating individual addresses to census tracts will exist Consequently, it will not be possible to evaluate the accuracy of the disclosure statement.

The second problem concerns institutions which manually assign census tracts, record the census tract number in the loan jacket, and also enter the census tract into a field on an automated mortgage master file. If, during subsequent editing, verification, or report preparation, the census tract for the property is found to be in error and is changed, this change will normally be posted to the automated mortgage master file only. Consequently an examiner using the loan jacket as "ground truth" while assessing the accuracy of the disclosure statement by randomly regeocoding loans would identify as a geocoding error a mortgage origination or home improvement loan that was reported in the appropriate census tract.

This concludes the discussion of the geocoding process. The following chapter presents results of the geocoding accuracy audits conducted in Buffalo, San Diego, and Chicago. This discussion gives insight into the magnitude of the geocoding accuracy problems and illustrates the impact of various geocoding procedures on the accuracy levels obtained.

CHAPTER 3

GEOCODING ACCURACY RESULTS FOR THE BUFFALO, SAN DIEGO, AND CHICAGO SMSAS

This chapter presents the results of the geocoding accuracy analysis in the Buffalo, San Diego, and Chicago SMSAs. These results indicate that geocoding accuracy is a problem in approximately 20 percent of the institutions in the three SMSAs and that inaccurate geocoding is more likely to occur in some SMSAs (i.e. Chicago), than in others (i.e., Buffalo, San Diego). These results emphasize that efforts to improve geocoding should focus upon the approximately 20 percent of depository institutions that are achieving less than 80 percent accuracy.

The methodology and full results of the geocoding accuracy audits are presented in the companion report, "Accuracy of Disclosure Statement Preparation."[1] In the following sections of this chapter, a summary of the results from the three SMSAs is presented. For each of the three SMSAs studied, this presentation is in three parts the composition of the study sample, presentation of results, and discussion of findings.

3.1 GEOCODING ACCURACY IN THE BUFFALO SMSA

3.1.1 The Study Sample

Twenty-two depository institutions were required to prepare disclosure statements under Federal or state regulations in the Buffalo Standard Metropolitan Statistical Area SMSA) during 1977. Eight of these institutions were required to prepare their disclosure statements under Regulation C, and 14 institutions were required to prepare their disclosure statements under Appendix of the New York State Banking Department's Supervisory Procedures G107 These twenty-two institutions included twelve commercial banks, five mutual savings banks, and five savings and loan associations.

The mean percentage of geocoding acccuracy for the 14 sampling units is 93.16 percent, and the standard error at the 95 percent confidence level -- is 1.51. Thus, it can be stated with 95 percent confidence that the accuracy with which the 22 institutions in the Buffalo SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement lies between 90.2 and 96.1 percent. Stated another way, there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 90.2 and 96.1 percent.

3.1.3 Discussion of Buffalo Results

The relatively high degree of geocoding accuracy within the Buffalo SMSA is undoubtedly influenced by the relatively small size of the SMSA, its relatively slow growth, and the availability of reliable manual and automated geocoding tools. An analysis of the geocoding techniques used by the eight depository institutions revealed no significant factor accounting for the variation in the accuracy of geocoding among these institutions. Table 3. shows the type of disclosure statement (i.e. Federal or state), the method of geocoding and the percentage accuracy achieved by each of the eight depository institutions studied in the Buffalo SMSA. Five institutions used the same external service bureau for geocoding and the accuracy that was achieved ranged from 86 to 100 percent. One institution used an internal automated address matching program, and this institution achieved 97 percent accuracy. One of the two institutions that used manual geocoding procedures achieved 97 percent accuracy, while the other achieved 84 percent accuracy.

Similarly, whether an institution prepared a Federal or state report appeared to have no significant impact on its level of geocoding accuracy. This is surprising in light of the fact that institutions preparing a state report under New York Law G107 are permitted to omit 15 percent of their loans from disclosure statements. In spite of this stipulation, institutions preparing Federal reports achieved geocoding levels of 97, 86, and 83.5 percent while those preparing state reports achieved comparable levels of 97, 92, 100, 90, and 98 percent.

The statistical sampling procedures designed for the study were used to select from among the 22 institutions 14 sampling units of 50 loans each for purposes of assessing the accuracy of geocoding at the SMSA level. This sampling procedure resulted in the initial selection of a study sample of eight institutions and fourteen sampling units. The eight institutions which participated in the accuracy audit were under the jurisdiction of four regulatory agencies:

Regulatory Agency	Number of Institutions
Federal Home Loan Bank Board	2
Federal Deposit Insurance Corporation	4
Board of Governors Federal Reserve System	1
Office of the Comptroller of the Currency	1

Data required to assess the accuracy with which institutions in the Buffalo SMSA geocode property addresses to census tracts were collected and analyzed. The results of this analysis are presented in Section 3.1.2.

3.1.2 The Results of the Geocoding Accuracy Audit

Using the procedures developed for the geocoding accuracy audits, 50 loans were randomly selected for each of the 14 sampling units. Table 3.1 provides a summary of the geocoding accuracy findings for the eight institutions and fourteen sampling units in the Buffalo SMSA. These findings are presented in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 3.1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE BUFFALO SMSA

Item	Value
Number of Sampling Units	14
Mean Percentage of Accuracy	93.16%
Standard Percentage of Error	1.51%
95 Percent Confidence Interval	90.2% to 96.1%

The mean percentage of geocoding acccuracy for the 14 sampling units is 93.16 percent, and the standard error at the 95 percent confidence level -- is 1.51. Thus, it can be stated with 95 percent confidence that the accuracy with which the 22 institutions in the Buffalo SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement lies between 90.2 and 96.1 percent. Stated another way, there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 90.2 and 96.1 percent.

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The relatively high degree of geocoding accuracy within the Buffalo SMSA is undoubtedly influenced by the relatively small size of the SMSA, its relatively slow growth, and the availability of reliable manual and automated geocoding tools. An analysis of the geocoding techniques used by the eight depository institutions revealed no significant factor accounting for the variation in the accuracy of geocoding among these institutions. Table 3.2 shows the type of disclosure statement (i.e. Federal or state), the method of geocoding and the percentage accuracy achieved by each of the eight depository institutions studied in the Buffalo SMSA. Five institutions used the same external service bureau for geocoding and the accuracy that was achieved ranged from 86 to 100 percent. One institution used an internal automated address matching program, and this institution achieved 97 percent accuracy. One of the two institutions that used manual geocoding procedures achieved 97 percent accuracy, while the other achieved 84 percent accuracy.

Similarly, whether an institution prepared a Federal or state report appeared to have no significant impact on its level of geocoding accuracy. This is surprising in light of the fact that institutions preparing a state report under New York Law G107 are permitted to omit 15 percent of their loans from disclosure statements. In spite of this stipulation, institutions preparing Federal reports achieved geocoding levels of 97, 86, and 83.5 percent while those preparing state reports achieved comparable levels of 97, 92, 100, 90, and 98 percent.

TABLE 3.2: COMPARISON OF TYPE OF DISCLOSURE STATEMENT, GEOCODING METHODS, AND ACCURACY ACHIEVED

Institution Designation	Federal or State Disclosure Statement	Geocoding Method	Percent Accuracy
Buffalo - 1	F	Manual by Loan Officer at Date of Closing	97
Buffalo - 2	S	Internal Automated Address Match Program	97
Buffalo - 3	S	Automated External Service Bureau	92
Buffalo - 4	F	Automated External Service Bureau	86
Buffalo - 5	S	Automated External Service Bureau	100
Buffalo - 6	S	Automated External Service Bureau	90
Buffalo - 7	S	Automated External Service Bureau	98
Buffalo - 8	F	Manual by Appraiser	84

3.2 GEOCODING ACCURACY IN THE SAN DIEGO SMSA

3.2.1 The Study Sample

Fifty-one depository institutions were required to prepare disclosure statements under Federal or state regulations in the San Diego Standard Metropolitan Statistical Area (SMSA) during 1977. Thirty-five of those institutions were required to prepare their disclosure statements under Regulation C, and sixteen institutions were required to prepare their disclosure statements under the State Fair Lending Report. These 51 institutions included 24 commercial banks and 27 savings and loan associations.

The statistical sampling procedures designed for the study were used to select from among the 51 institutions 15 sampling units of 50 loans each for purposes of assessing the accuracy of geocoding at the SMSA level. This sampling procedure resulted in the selection of ten depository institutions from which the 15 sampling units were drawn. Nine of the ten participating institutions were under the jurisdiction of the Federal Home Loan Bank Board, and one was under the jurisdiction of the Federal Deposit Insurance Corporation.

Data required to assess the accuracy with which institutions in the San Diego SMSA geocode property addresses to census tracts were collected and analyzed. The results of this analysis are presented in Section 3.2.2.

3.2.2 The Results of the Geocoding Accuracy Audit

Using the procedures developed for the geocoding accuracy audit, 50 loans were randomly selected for each of the 15 sampling units. Table 3.3 provides a summary of the geocoding accuracy findings for the ten institutions and fifteen sampling units studied in San Diego. These findings are presented in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 3.3: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE SAN DIEGO SMSA

Item	Value
Number of Sampling Units	15
Mean Percentage of Accuracy	92.05 %
Standard Percentage of Error	1.49%
95 Percent Confidence Interval	89.31% to 94.97%

The mean percentage of geocoding accuracy for the 15 sampling units is 92.05 percent, and the standard error--at the 95 percent confidence level--is 1.49. Thus, it can be stated with 95 percent confidence that the accuracy with which the 51 institutions in the San Diego SMSA geocoded their property addresses to census tracts for use in 1977 disclosure statement lies between 89.13 and 94.97 percent. Stated another way, there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 89.13 and 94.97 percent.

3.2.3 Discussion of San Diego Results

The relatively high degree of geocoding accuracy within the San Diego SMSA is greatly influenced by the availability and proper use of a reliable and up-to-date manual geocoding tool Thomas Brothers Maps.[8] As shown in Table 3.4, all ten sampled institutions used this publication.

3.3 GEOCODING ACCURACY IN THE CHICAGO SMSA

3.3.1 The Study Sample

Four hundred and fifty-two institutions were required to prepare disclosure statements under Federal or state regulations in the Chicago Standard Metropolitan Statistical Area (SMSA) during 1977. At the start of 1977 these institutions were required to prepare their disclosure statements under either Regulation C or the Illinois Financial Institutions Disclosure Act. During 1977, however,

TABLE 3.4: COMPARISON OF TYPE OF DISCLOSURE STATEMENT, GEOCODING METHODS, AND ACCURACY ACHIEVED

Institution Designation	Federal (F) or State (S)	Geocoding Method	Percent Accuracy
San Diego - 1	F	Manual Using SIMS ACGs & TBM	91
San Diego - 2	F	Manual Using TBM	96
San Diego - 3	S	Manual Using TBM	96
San Diego - 4	S	Manual Using TBM	94
San Diego - 5	F	Manual Using TBM	85
San Diego - 6	S	Manual Using TBM	90
San Diego - 7	F	Manual Using TBM	87
San Diego - 8	S	Manual Using TBM	85
San Diego - 9	S	Manual Using TBM	98
San Diego - 10	F	Manual Using TBM & CTM	98

NOTE: SIMS ACG is Savings Institution Management Sciences, Inc.
TBM is Thomas Brothers Maps
CTM is the Ph 1 Series Published by the Bureau of Census

the State Act was ruled unconstitutional by the Illinois State Supreme Court, and subsequently all institutions were required to file under Regulation C. These 452 institutions included 291 commercial banks, and 161 savings and loan associations.

The statistical sampling procedures developed for the study were revised slightly to select the 30 sampling units of 50 loans each for purposes of assessing the accuracy of geocoding at the SMSA level. This sampling procedure resulted in the selection of 26 depository institutions from which the 30 sampling units were drawn. The 26 institutions which participated in the accuracy audit were under the jurisdiction of four regulatory agencies:

Regulatory Agency	Number of Institutions
Federal Home Loan Bank Board	13
Federal Deposit Insurance Corporation	7
Board of Governors Federal Reserve System	5
Office of the Comptroller of the Currency	1

Data required to assess the accuracy with which institutions in the Chicago SMSA geocode property addresses to census tracts were collected and analysed. The results of this analysis are presented in Section 3.3.2.

3.3.2 The Results of the Geocoding Accuracy Audit

Using the procedures developed for the geocoding accuracy audits, 50 loans were randomly selected for each of the 30 sampling units. Table 3.5 presents a summary of the geocoding accuracy findings for the 26 institutions and 30 sampling units. These findings are presented in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 3.5: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN THE CHICAGO SMSA

Item	Value
Number of Sampling Units	30
Mean Percentage of Accuracy	82.27%
Standard Percentage of Error	3.11%
95 Percent Confidence Interval	76.17% to 88.37%

The mean percentage of geocoding accuracy for the 30 sampling units is 82.27 percent and the standard error, at the 95 percent confidence level, is 3.11 percent. Thus, it can be stated with 95 percent confidence that the accuracy with which the 452 institutions in the Chicago SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement lies between 76.17 and 88.3 percent. Stated another way, there is 95 percent probability that the geocoding accuracy level of any one institution in the Chicago SMSA will fall between 76.17 and 88.3 percent.

3.3.3 Discussions of Chicago Results

The accuracy with which depository institutions in Chicago geocode addresses to census tracts is much lower than in either the Buffalo or San Diego SMSAs. Table .6 shows the geocoding methods used and the percentage of geocoding accuracy for each institution. A greater variety of tools are used in the Chicago SMSA, and these include the SIMS ACG, the Dun and Bradstreet BANCODE Census Coding Directory,[10] city maps, and the Census Tract Maps published by the Bureau of the Census.[11]

Seven institutions rely solely on census tract maps or other maps, and these institutions achieved lower levels of accuracy than did the other institutions. The accuracy levels achieved by these seven institutions ranged from a low of 42.5 percent to a high of 84 percent. Four of the seven achieved accuracy levels less than 70 percent. Maps, by themselves, are not adequate

TABLE 3.6: COMPARISON OF TYPE OF DISCLOSURE STATEMENT, GEOCODING METHODS, AND ACCURACY ACHIEVED

Institution Designation	Federal (F) or State (S)	Geocoding Method	Percent Accuracy
Chicago - 1	F	Manual Using CTM & SIMS ACG	95
Chicago - 2	F	Manual Using CTM & SIMS ACG	94
Chicago - 3	F	Manual Using CTM	62
Chicago - 4	F	Automated & Manual Using SIMS ACG	100
Chicago - 5	F	Manual Using CTM, SIMS ACG, D&B	93
Chicago - 6	S	Manual Using SIMS ACG	66
Chicago - 7	S	Manual Using CTM	78
Chicago - 8	S	Manual by External Appraisal Service	69
Chicago - 9	F	Manual Using CTM	59
Chicago - 10	F	Automated Service Bureau & Manual SIMS ACG	98
Chicago - 11	F	Manual Using SIMS ACG	89
Chicago - 12	F	Manual Using CTM & SIMS ACG	92
Chicago - 13	F	Manual Using CTM & SIMS ACG	98
Chicago - 14	S	Manual Using CTM & D&B	53
Chicago - 15	S	Manual Using CTM	42.5
Chicago - 16	F	Manual Using CTM	84
Chicago - 17	S	Manual Using CTM & SIMS ACG	100
Chicago - 18	S	Manual Using D&B	92
Chicago - 19	S	Manual Using CTM & Street Map	72
Chicago - 20	S	Manual Using CTM & D&B	90
Chicago - 21	S	Manual Using Chicago Map	61
Chicago - 22	S	Manual Using CTM & SIMS ACG	91
Chicago - 23	F	Automated Using Ad-Match & Manual for Non-Match	90
Chicago - 24	F	Manual Using CTM & D&B	89.5
Chicago - 25	S	Manual Using D&B	96
Chicago - 26	F	Manual Using CTM & SIMS ACG	94

NOTE: D&B is Dun & Bradstreet BANCODE Census Coding Directory
Chicago Map used by Chicago - 21 is Chicago Association of Industry and Commerce
CTM is the PH 1 Series published by Bureau of Census
SIMS ACG is Savings Institution Management Sciences, Inc., Address Coding Guide

for accurate geocoding. Sole reliance on maps for geocoding will lead to substantial levels of geocoding inaccuracy, particularly in the more densely populated urban areas where individual census tracts occupy small geographical areas.

The results show conclusively that geocoding can be performed accurately if the currently available address coding guides are obtained and used properly and if the census tract numbers assigned to addresses are accurately recorded and maintained on files. Eight of the nine institutions using the SIMS ACG achieved accuracy levels greater than 90 percent. The ninth institution achieved an accuracy level of 66 percent. All three institutions using automated address-matching techniques supplemented by the manual use of address coding guides achieved accuracy levels of 90 percent or better. Five of the six institutions using the Dun and Bradstreet BANCODE Census Coding Directory achieved accuracy levels of 90 percent or better. The sixth achieved an accuracy level of 53 percent.

Thus, the institutions achieving poor geocoding accuracy levels fall into two categories: 1) those relying solely on census tract maps or other maps and, 2) those few institutions which are either not using address coding guides properly or which are not accurately recording and maintaining the results of the census tract assignments.

CHAPTER 4

RECOMMENDATIONS
TO IMPROVE GEOCODING

The results of the analysis of the methods and accuracy of geocoding indicate that institutions in the Buffalo and San Diego SMSAs are achieving acceptable accuracy levels, but that many institutions in the Chicago SMSA are not achieving acceptable accuracy levels. The results of the analysis of geocoding indicate that approximately 35 percent of the depository institutions in the Chicago area are achieving unacceptable levels below 80 percent. These results are summarized in Table 4.1.

TABLE 4.1: GEOCODING ACCURACY

SMSA	Number of Institutions Sampled	Accuracy ≥ 80% Number	Accuracy ≥ 80% Percent	Accuracy ≥ 85% Number	Accuracy ≥ 85% Percent	Accuracy ≥ 90% Number	Accuracy ≥ 90% Percent
Buffalo	8	8	100	7	87.5	6	75
Chicago	26	17	65	16	61.5	13	50
San Diego	10	10	100	10	100	7	70
Total	44	35	79.5	33	75	27	61

The results of the accuracy analysis show vividly that efforts to improve geocoding should be focused on approximately 20 percent of the depository institutions that are achieving less than 80 percent accuracy in geocoding.

The disclosure statement submitted by depository institutions for analysis during this study reflected 1977 disclosure data. Nevertheless, during site visits, the team discussed not only procedures used to geocode addresses reported in these statements, but also processes currently being utilized by mortgage loan and consumer loan departments. Consequently, our suggestions address existing geocoding difficulties. Implementation of these suggestions requires a minimal expenditure of resources by institutions required to report under the Act. Primary recommendations are to:

- Require that each institution maintain, or preserve records enabling them to recreate, a listing of property addresses for mortgage originations and home improvement loans with the appropriate census tracts, for all loans included in the annual disclosure statement.
- Require examiners to verify the accuracy of the geocoding process by regeocoding a random sample of reported loans during scheduled examinations.
- Require that the examiner notify the institution of the availability of address coding guides if the staff presently relies on maps for census tract assignment.

4.1 EDUCATION

During discussions with institution personnel, it became apparent that many staff members were not aware of the definition of a census tract, factors which govern the creation of census tracts, or the purpose of reporting loans by census tract. Most institution personnel did not realize that census tract numbers change only after each census or every ten years. Nor did they realize that census tracts are often added between census years or possess a clear understanding of the decimal system of census tract numbers. Many institution personnel were unaware that census tracts were chosen as the reporting unit for disclosure statements to facilitate the use of demographic data. Most staff thought that census tract numbers were chosen to indicate the general location of property and, therefore, were not overly concerned if a property address was incorrectly assigned an adjacent census tract number, since such an assignment still represented the approximate location of the property. Most individuals involved in geocoding were interested in learning how to improve their performance. Thus, geocoding accuracy could be improved simply by providing these individuals with a brief background statement about the definition and rationale for census tracts and on the fundamentals of geocoding.

4.2 INTERACTION AMONG DEPARTMENTS

It became apparent during site visits that the mortgage loan departments and consumer loan departments geocode their loans separately. In many cases, there was a marked difference between the geocoding accuracy of the two departments. In some instances the departments used different tools and geocoding processes. Geocoding accuracy can be improved by encouraging the interaction of the mortgage and consumer loan departments of an institution, thereby ensuring that the most accurate geocoding process and tools are being utilized by both departments.

4.3 TOOLS

It became apparent during discussions with the staff of financial institutions that many institutions particularly commercial banks were not aware of the various types of geocoding tools available. The only geocoding tools many institutions were aware of were Census Tract Outline Maps. Geocoding accuracy can be improved by advising institutions that Census Tract Outline Maps are not appropriate geocoding tools, and they should only be utilized in conjunction with Address Coding Guides and/or Census Tract Maps.

4.4 PROCEDURES

Geocoding accuracy can be improved by training geocoding staffs to follow a standard geocoding procedure. These procedures should include the creation of a loan listing which includes specific property addresses and corresponding census tract numbers. The creation of a loan listing will ensure that an audit trail is maintained which will enable either the institution or regulatory agency to perform a census tract verification to assess geocoding accuracy.

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ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

PROCEDURES TO ASSESS THE ACCURACY OF HOME MORTGAGE DISCLOSURE STATEMENTS

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
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JRB Project 2-800-04-118

JRB Associates, Inc.

TABLE OF CONTENTS

Page

FOREWORD i

1. INTRODUCTION 1-1
   - 1.1 Purpose 1-1
   - 1.2 Scope 1-1
   - 1.3 Contents 1-2

2. GEOCODING PROCEDURES 2-1
   - 2.1 Institution Data and Geocoding Tools 2-1
   - 2.2 Geocoding Procedures 2-4
     - 2.2.1 Determining the Audit Sample Size 2-4
     - 2.2.2 Determine the Statistical Implications of the Selected Sample Size 2-5
     - 2.2.3 Selecting the Audit Sample 2-9
     - 2.2.4 Geocoding the Audit Sample 2-9
     - 2.2.5 Determining the Audit Sample Accuracy 2-9
   - 2.3 Improved Procedures 2-11
   - 2.4 Resources Required for Examination 2-12

3. AGGREGATION PROCEDURES 3-1
   - 3.1 Data Requirements 3-3
   - 3.2 Aggregation Audit Procedures 3-4
     - 3.2.1 Audit of Accuracy of Loan Listing 3-4
     - 3.2.2 Audit of Aggregation Accuracy 3-10
   - 3.3 Improved Procedures 3-17
   - 3.4 Resources Required for Examination 3-17

REFERENCE R-1

APPENDIX A A-1

APPENDIX B B-1

LIST OF TABLES

TABLE B.1: Schedule A: Institutions with Estimated Geocoding Accuracy of 90 Percent B-4

TABLE B.2: Schedule B: Institutions with Estimated Geocoding Accuracy of 80 Percent B-5

LIST OF FIGURES

FIGURE 2.1: Institution Geocoding Procedure Form 2-3

FIGURE 2.2: Geocoding Form 2-10

FIGURE 3.1: Two Stage Procedure for Assessing Aggregation Accuracy 3-2

FIGURE 3.2: Example Check List 3-6

FIGURE 3.3: Diagram of Two Phases of First Stage of Aggregation Accuracy Audit 3-7

FIGURE 3.4: Loan Listing Accuracy Form 3-9

FIGURE 3.5: Loan Information Selection Worksheet 3-12

FIGURE 3.6: Notations to be Used on Loan Information Collection Worksheet 3-13

FIGURE 3.7: Aggregation Worksheet 3-15

FIGURE 3.8: Aggregation Comparison Worksheet 3-16

FIGURE B.1: Geocoding Accuracy Audit Data Form B-6

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC) under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements, identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirments of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

CHAPTER 1
INTRODUCTION

1.1 PURPOSE

The purpose of this report is to suggest procedures which can be used by regulatory examiners to assess the accuracy with which depository institutions are preparing their home mortgage disclosure statements.

1.2 SCOPE

The report suggests procedures which can be used during compliance examinations to assess the accuracy with which an institution performed the two major processes involved in the preparation of its disclosure statement — geocoding and aggregation. Geocoding is the process of assigning a census tract to the address of the residential property for which a loan was originated. Aggregation is the process by which data on mortgage loans (e.g., amount, type of loan, type of property, census tract) are collected, recorded, selected, processed, and reported on disclosure statements. Assessment of the accuracy with which these two processes are performed provides a measure of how accurately the disclosure statements prepared by subject institutions reflect their actual lending patterns.

The suggested procedure for both geocoding and aggregation provide a means to "spot check" the accuracy with which the process was performed by the institution. An alternative approach is also provided for assessment of the accuracy of geocoding. This alternative procedure provides a means for assessing the accuracy of geocoding in terms of statistically valid estimates. A similar alternative statistical procedure was not developed for assessing the accuracy of aggregation because of the large number of variables associated with aggregation and the related costs necessary to generate the required data for analysis.

The procedures suggested in this report were derived from our experiences during Phase II of the study, which involved the evaluation of more than

50 home mortgage disclosure statements. This experience was supplemented with information obtained from residential mortgage department officials and consumer loan department officers interviewed during our 44 site visits to depository institutions.

The suggested procedures for the assessment of accuracy of both geocoding and aggregation are predicated upon the availability of listing of the loans that were included in the disclosure statement In a companion report, "Revisions to Regulation C,"[1] the suggestion is made that Regulation C be revised to require depository institutions to make the loan listing available for purposes of examination. An important study finding is that such a loan listing is essential to a cost effective examination of the contents and accuracy of disclosure statements and the absence of such listinga is a factor contributing to inaccuracies in disclosure statements.

1.3 CONTENTS

Suggested procedures to assess the accuracy of geocoding are presented in Chapter 2; suggested procedures to assess the accuracy of aggregation are presented in Chapter 3. Each chapter is organized into four sections. The first section describes the data or tools necessary for the accuracy audit. The second section depicts specific procedures for the accuracy audit and the third section suggests methods to improve accuracy. Finally, the fourth section addresses examiner resources necessary to conduct the audit.

CHAPTER 2

GEOCODING PROCEDURES

The purpose of this chapter is to suggest procedures which can be used by examiners to assess the accuracy with which an institution geocoded the loans that were included on its disclosure statement The examination procedure provides for a "spot check" of the institution s geocoding accuracy based upon a random sample of loans selected by the examiner. Methods are provided to allow the examiner to determine the statistical implications of the sample size selected for purposes of the examination.

In Section 2.2.1 of this chapter, reference is made to an alternative approach for determining the sample size on the basis of preselected statistical considerations. This alternative approach is presented in Appendix B.

Section 2.1 of this chapter discusses the loan data and geocoding tools needed to undertake the geocoding accuracy audit. Section 2.2 discusses procedures to be followed in performing the geocoding accuracy audit Section 2.3 suggests methods an examiner might recommend to increase geocoding accuracy. Section 2.4 discusses the resources required to regeocode loans during an accuracy audit.

2.1 INSTITUTION DATA AND GEOCODING TOOLS

The purpose of a geocoding accuracy audit is to determine the level of accuracy with which an institution assigns census tract numbers to property addresses. The audits conducted by the study team in the accuracy phase of the study indicate that the level of geocoding accuracy attained by an institution is closely related to the tools used in geocoding. These results indicate that institutions should be able to attain a 90 percent level of geocoding accuracy if the optimal tools — Address Coding Guides — are used. Conversely, they indicate that institutions that use inappropriate geocoding tools, such as maps, are likely to achieve accuracy levels of less than 80 percent. For this reason, the examiner must consider during the accuracy audit, the accuracy ratio attained by the institution in light of the geocoding tools and procedures used. An important by-product of the audit should be suggestions by the examiner on the use of alternate procedures and tools that would improve geocoding accuracy. These suggestions should be provided to the institution in writing by the Supervisory Agent.

To make such suggestions, the examiner must be familiar with tools and procedures currently in use by the institution. To gain such familiarity, it is suggested that the examiner obtain the information shown in Figure 2.1, Institution Geocoding Procedures, with the help of the representatives of the institution. This should be done at the start of the audit. Once this information is obtained, the examiner will understand the current geocoding procedures used by the institution. This information can also be used by the examiner to determine the appropriate sample size for the accuracy audit; and therefore, it should be obtained at the start of the geocoding accuracy audit.

The auditing procedures suggested in this chapter depend upon the availability of a loan listing containing the loan number, type of loan, complete property address, zip code and census tract for each mortgage or home improvement loan originated or purchased during the year in each relevant SMSA. This loan listing provides, among other things, data on the geographical location of properties for which loans were originated, and is a baseline against which the accuracy of an institution's geocoding can be assessed. The suggested procedure assumes that institutions will maintain such a loan listing and make it available to the examiner at the start of the audit. Requiring institutions to prepare the loan listing along with the disclosure statement is an essential prerequisite to proper assessment — within a reasonable amount of time — of both the accuracy of geocoding and aggregation. Without such a loan listing, an examiner would be confronted with data collection activities requiring many days of effort to merely obtain the data needed for examination purposes. A more complete discussion of the recommendation for the loan listing is presented in a companion report, entitled "Revisions to Regulation C."[1]

STAFF USED TO GEOCODE	USED		IF USED, PLEASE INDICATE NUMBER OF PEOPLE
	YES	NO	
APPRAISER			
UNDERWRITER			
LOAN OFFICER			
SECRETARY			
CLERK			
TEMPORARY			
OTHER (SPECIFY)			

TOOLS USED TO GEOCODE	USED		IF USED, PLEASE INDICATE WHICH ONE
	YES	NO	
ADDRESS CODING GUIDE			
AUTOMATED GEOCODING PROGRAM			
OTHER MAPS			
CENSUS TRACT MAPS			
OTHER			

GEOCODING PERFORMED CONTINUOUSLY ______________________________

GEOCODING PERFORMED AT YEAR END ______________________________

FIGURE 2.1 INSTITUTION GEOCODING PROCEDURE FORM

The procedures suggested in this chapter require that examiners come to the audit armed with information on various aspects of geocoding. First, the examiner must be familiar with the concepts of geocoding and the relationship between census tracts and demographic data. Second, the examiner must be familiar with the relative quality of the various geocoding tools available for the SMSA for which loans are to be geocoded. Finally, and most importantly in conducting the audit, the examiner must be aware of and utilize the most detailed and up-to-date geocoding tools available. In most SMSAs this would be the Address Coding Guide (ACG) published by Savings Institutions Management Science, Inc.[2] Issues related to selection of the most appropriate geocoding tool are discussed in a companion report, "Methods to Improve Geocoding Accuracy."[3]

2.2 GEOCODING PROCEDURES

In this section, geocoding audit procedures are discussed in five subsections. The first subsection introduces the two approaches tha can be used to determine the sample size to be used in the audit. Second methods are presented for determining the statistical implications of the selected sample size. Third, the selection of the audit sample is discussed. Next procedures for the geocoding of the audit sample are presented. Finally, the manner in which the accuracy of the audit sample is to be determined is discussed.

2.2.1 Determine the Audit Sample Size

In determining the appropriate number of loan addresses (i.e., sample size) to be selected for "spot checking" the geocoding accuracy, the examiner should consider both the amount of time available for this portion of the examination and the statistical statements that can be made based upon the results.

In the three SMSAs of the study -- Buffalo, San Diego, and Chicago -- manual geocoding can be performed at the rate of 2-5 minutes per loan where both complete address information is available and address coding guides are used. Given these, an examiner can geocode a sample of 10 loans in 20 to 50 minutes. With experience an examiner will be able to refine the estimates of the rate at which geocoding can be performed for each SMSA.

Knowing the geocoding rate and the approximate time available, the examiner is ready to determine the appropriate sample size in the light of the level of confidence and the level of error that can be associated with the results of the examination. Two approaches are possible at this point. Under the first approach the examiner may on the basis of the geocoding rate and time available, determine that only a specified number of loan addresses (e.g., 20) are to be geocoded. In this case the examiner can either a) ignore the statistical estimates that can be associated with the findings or b estimate the level of confidence and the level of error that can be associated with the findings. Under the second approach, the examiner would first select the desired level of confidence and the desired level of error and then, determine the appropriate sample size to provide these two levels.

Examiners that use the first approach but that choose to ignore the statistical estimates, can skip the remainder of this section and proceed directly to Section 2.2.3. Examiners that use the first approach but that choose to consider the statistical implications of the selected sample size should follow the procedures in Section 2.2. Examiners that use the second approach should follow the alternative procedure described in Appendix B before proceeding to Section 2.2.3.

2.2.2 Determine the Statistical Implications of the Selected Sample Size

As discussed in Appendix A the sample size (n) is a function of four variables:

- Total number of Loans (N)
- Estimate of the expected geocoding accuracy rate of the institution (P)
- Desired precision or level of error of the estimate (e)
- Level of confidence in the estimate (Z)

These are combined in the following equation:

Equation 1: $$\frac{e^2}{Z^2} = \frac{P(1-P)}{n} - \frac{P(1-P)}{N}$$

This formula is based upon a normal approximation to the hypergeometric distribution, and the reliability of the approximation is subject to the limitations discussed in Appendix A.

The Precision of the Estimate: The variable "e" indicates the error range, in percent, that is applicable to the estimated mean geocoding accuracy level achieved by the institution based upon the sample of loans that are geocoded by the examiner. For example, if the examiner found that 17 of 20 sampled loans were correctly geocoded by the institution, the mean accuracy level for the institution would be estimated to be 85 percent. If the precision of the estimate (i.e. error range) "e" is percent the interval estimate of geocoding accuracy for the institution is 80 percent to 90 percent. When the error range is combined with the level of confidence, say 90 percent, the examiner can determine the significance of the geocoding results.

The Level of Confidence of the Estimate: The level of confidence of the estimate is determined by the variable "Z" which expresses the number of standard deviations to either side of the mean. For example, in the normal distribution a "Z" of 1.645 standard deviations to either size of the mean covers 90 percent of the area under the normal distribution (See Page A-4, Appendix A). This, in turn, provides a 90 percent level of confidence. Using the above example and assuming for the moment that the other variables N, P, n, are appropriate, the examiner can say with 90 percent confidence that the geocoding accuracy level of the institution lies between 80 and 90 percent.

Estimate of the Institution's Expected Accuracy Rate: As shown in Equation 1, the variable "P" an *a priori* estimate of the expected geocoding accuracy rate of the institution, has a significant impact on the other variables. The variable "P" is expressed as a percentage, and has a value between 0.0 (no addresses geocoded correctly) and .0 (all address geocoded correctly) As the expected geocoding accuracy rate of the institution approaches a value of 0.5, the required sample size and the level of error both increase for a given level of confidence Conversely, as the expected geocoding accuracy of the institution approaches unity, the required sample size and the level of error both decrease for a given level of confidence. For example, assume that two institutions each have a total of 500 loans in their disclosure statement and that the level of confidence and the level of error associated with the sample results are 90 percent and 5 percent, respectively for both institutions. Further assume that an a priori estimate of the expected geocoding accuracy rate is 90 percent for one institution and 80 percent for the other institution. A sample of 82 loans is required for the first institution and a sample of 129 loans is required for the second institution to enable a 90 percent level of confidence and a 5 percent level of error to be associated with the results.

This estimate will involve a subjective judgement on the examiner's part and will be based on information obtained on the Institution Geocoding Procedures Form. This judgement should be based on answers obtained to the following questions:

- Who in the institution performs the geocoding? Is it appraisers, underwriters, loan officers, clerks, or temporaries?
- What geocoding tools are used? Are they Census Tract Maps, Other Maps, Address Coding Guides Automated Goecoding Programs?
- What time frame is used for geocoding? Is it done continuously or on a retrospective basis?

With experience, the examiner will learn to accurately and rapidly predict the level of geocoding accuracy. The examiner will discover, for example, that institutions using the optimal tools Address Coding Guides - can be expected to obtain geocoding accuracy levels of 90%; whereas, those using maps can be expected to obtain low accuracy levels (e.g , 80%). Various factors relating the accuracy of geocoding are discussed in a companion study report entitled, "Methods to Improve Geocoding Accuracy."[3]

Determine the Total Number of Loans: The fourth variable in Equation 1 is N, the total number of loans in the population to be geocoded. The total number of mortgage and home improvement loans included on the disclosure statement can be determined from the loan listing As discussed in Appendix A, the required sample size, for a given level of confidence and level of error, increases as the number of loans included on the disclosure statement increases. However, a maximum sample size is ultimately reached, and no further increase in sample size is required for larger numbers of loan in the disclosure statement.

Determining the Level of Confidence and Error: The examiner can determine the level of confidence and the level of error that can be associated with the sample size of loans selected for the "spot check" of geocoding accuracy by using Equation 1 to make a few simple calculations. An example is used to illustrate this procedure. Assume the following:

- The total number of loan addresses (N) is 500
- The number of loans in the sample (n) is 30
- The *a priori* estimate of the institution's expected accuracy rate is 80 percent
- The examiner wishes to know the level of error that will be associated with a level of confidence of 90 percent.

Applying Equation 1, results in the following:

$$\frac{e^2}{(1.645)^2} = \frac{(.80)(.20)}{30} - \frac{(.80)(.20)}{500} = 0.00533 - 0.00032$$

$$e^2 = (0.00501)(1.645)^2 = 0.0136$$

$$e = 0.116$$

In this example, the level of error is determined to be 11.6 percent. If the institution's mean accuracy rate is determined to be, say 82 percent; then, the examiner can state, with a 90 percent level of confidence, that the institution actual accuracy level lies between 70.4 and 93.6 percent. If a sample of 60 loan addresses were selected, by a similar calculation the examiner would determine that the level of error is 8 percent. The examiner can then state, with a 90 percent level of confidence, that the institution's actual accuracy level lies between 74 and 90 percent.

In addition, the examiner can modify the level of error by modifying the level of confidence. For example, the variable "Z" for a level of confidence of 77 percent has a value of 1.2 For the sample of 60 loan addresses above, the examiner can, by applying Equation 1, determine that the level of error is

5.8 percent. Thus, the examiner can state, with a 77 percent level of confidence, that the institution's actual accuracy level lies between 76.2 and 87.8 percent.

2.2.3 Selecting the Audit Sample

The first step in selecting the loans to be included in the audit sample is to derive a value equalling "I" by dividing the total number of loans on the listing, N, by the sample size, n. Then, after a random start, the sample of loans is selected by choosing every Ith loan for auditing. Each sample selection should be underlined on the loan listing. The examiner may either use the loan listing (if the address is included) or enter the loan number and complete property address for each sample selected on the Geocoding Form (Figure 2.2)

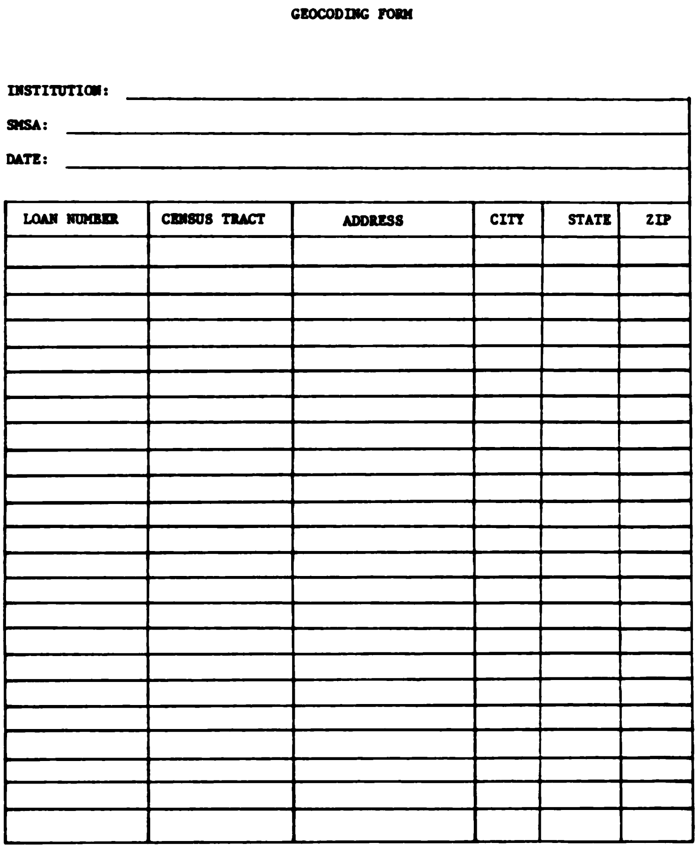
2.2.4 Geocoding the Audit Sample

The examiner should then regeocode the sample of loans using the most accurate geocoding tools available. During the regeocoding process the examiner should not refer to the census tract number assigned by the institution. The census tract number assigned by the examiner should be noted on the Geocoding Form in the census tract column.

It should be noted that an audit of geocoding accuracy seeks to determine the percentage of loans that were geocoded accurately among those that could be found. Even using the best [illegible] the Address Coding Guide — it is likely that an examiner will not find [illegible] loans in the sample. In some instances, such loans may constitute a significant percentage of the sample. To preserve the integrity of the sample, these loans are to be replaced using the selection procedures outlined in the previous section.

2.2.5 Determining the Audit Sample Accuracy

The accuracy [illegible] of the audit sample can be determined after the examiner has regeocoded the selected sample of loans. This is done by comparing the census tract number assigned by the institution in its loan listing with the census tract assigned by the examiner on the Geocoding Form.



GEOCODING FORM

INSTITUTION: ______________________________

SMSA: ______________________________

DATE: ______________________________

LOAN NUMBER	CENSUS TRACT	ADDRESS	CITY	STATE	ZIP

FIGURE 2.2 GEOCODING FORM

Where there are discrepancies between the census tracts assigned by the institution and those assigned by the examiner, the examiner should note the discrepancy by placing an X next to the loan # on the Geocoding Form. The examiner should then ensure that the address data on the Geocoding Form is correct by checking to make sure that the data from the loan listing was copied correctly. If the addresses are correct, the examiner should note the census tract number assigned by the institution on the Geocoding Form in a manner distinguishable from the examiner's census tract assignment. The examiner should regeocode the addresses which have census tract assignment discrepancies. If the regeocoding of these census tracts produces the same discrepancies, the examiner should mark the institution's census tract assignments as incorrect.

After the examiner has completed regeocoding all census tract discrepancies, the number of correct and incorrect census tract assignments should then be determined. The examiner should record these data on the Geocoding Accuracy Audit Data Form (Figure 2.2), and compute the percentage of the total loans sampled that were geocoded correctly by the institution.

If the procedures outlined in Section 2.2.1 or Appendix B have been followed, the examiner can then make a statistically valid statement regarding the geocoding accuracy of the institution. This statement would be of the form: Institution A has a geocoding accuracy ratio of X%, as determined to a Y% confidence level in an error range of Z%.

2.3 IMPROVED PROCEDURES

Based on the estimated percentage of geocoding accuracy achieved during the geocoding accuracy audit, the Supervisory Agent should suggest, where appropriate alternative procedures by which an institution could improve its geocoding accuracy to an acceptable level (e.g. 90 percent). Such suggestions are only appropriate for those institutions whose accuracy levels are below an "acceptable" accuracy level determined by the examiner after consideration of the various types of geocoding tools and procedures available to the institution in the SMSA.

When an institution's accuracy level is below an established acceptable level, the examiner should attempt to detect the sources of patterns of errors, such as disregarding odd and even address ranges. Such sources of errors are discussed at length in the companion study report entitled "Methods to Improve Geocoding Accuracy."[3]

Based upon knowledge of the quality and tradeoffs associated with the various types of geocoding tools and procedures, the Supervisory Agent should make appropriate suggestions for alternative geocoding procedures which would improve the geocoding accuracy. These suggestions should be provided to the institution in writing by the Supervisory Agent as part of the overall findings of the examination.

2.4 RESOURCES REQUIRED FOR EXAMINATION

The resources required for examination of the accuracy of geocoding are a function of two factors: the availability and accessibility of information to the examiner and the number of loans to be regeocoded. Manual geocoding by examiners can be performed at a rate of 2-5 minutes per loan where both complete address information and address coding guides are available. Thus, to regeocode a statistical sample 100 loans would require 200 to 500 minutes (i.e., 3.3 and 8.3 hours) for this task. A spot check could be performed on a small sample (e.g. 10-20 loans) at a substantially reduced burden, but the resultant estimate of the accuracy level would be accompanied by low statistical confidence level. The result of the accuracy analysis show a clear need to assess the accuracy of geocoding, since approximately 20 percent of the institutions sampled in the accuracy study were found to be achieving geocoding accuracy levels of less than 80 percent. The results of the accuracy audit discussed in detail in a companion report entitled "Accuracy of Disclosure Statement Preparation .[1] These results show that the depository institutions in the Buffalo and San Diego SMSAs are achieving acceptable geocoding accuracy levels, but that approximately 35 percent of the depository institutions in the Chicago area are achieving unacceptable accuracy levels below 80 percent.

If statistical methods are employed, assessing the geocoding accuracy of 8700 institutions that are subject to the Home Mortgage Disclosure Act will impose a substantial added burden upon the regulatory agencies. A spot check can be performed at a small fraction of the burden associated with the statistical approach, but also at substantial increase in the uncertainty associated with the results.

CHAPTER 3
AGGREGATION PROCEDURES

The purpose of this chapter is to suggest procedures which can be used by examiners to assess the accuracy with which institutions aggregated the loan information in each census tract line of their disclosure statement. This assessment involves a determination of the degree to which the appropriate quantities, types and amounts of loans were correctly aggregated into the various census tracts lines.

The procedure outlined in this chapter assumes the availability of a loan listing containing complete information (e.g., loan number, type of loan, census tract, etc on each loan included in the disclosure statement. Given such a loan listing, the aggregation procedure entails a two stage process. The first stage determines the extent to which the information on the loan listing, itself, is correct. This involves comparison of the information on the loan listing with "ground truth" information as reflected on the master file, loan jackets, or application file. The second stage determines the extent to which the data contained on the loan listing were accurately aggregated into the census tract lines on the disclosure statement. Figure 3.1 presents a diagram of the two stage process.

The suggested procedures for assessing the accuracy of aggregation provide for a "spot check" of several potential sources of inaccuracy rather than providing means for making statistically valid statements of the accuracy level Although a means for the latter approach could be devised, the large number of potential sources for aggregation errors makes such an approach impractical. A well-reasoned spot check however, can enable an examiner, with a relatively small effort, to detect the presence of significant errors.

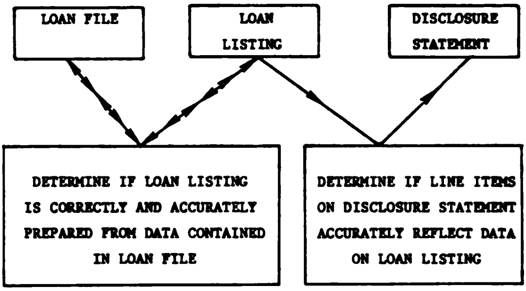

LOAN FILE
LOAN LISTING
DISCLOSURE STATEMENT
DETERMINE IF LOAN LISTING IS CORRECTLY AND ACCURATELY PREPARED FROM DATA CONTAINED IN LOAN FILE
DETERMINE IF LINE ITEMS ON DISCLOSURE STATEMENT ACCURATELY REFLECT DATA ON LOAN LISTING

FIGURE 3.1 TWO STAGE PROCEDURE FOR ASSESSING AGGREGATION ACCURACY

Section 3.1 of this chapter outlines the data necessary to conduct the aggregation accuracy audit. Section 3.2 discusses the examination procedures to be followed to perform the audit. Section 3.3 discusses methods which could be suggested by examiners to increase the accuracy of aggregation. Section 3.4 presents an estimate of the resources required to perform a "spot check" of the accuracy of aggregation.

3.1 DATA REQUIREMENTS

The data required to conduct the aggregation accuracy audit includes a copy of the institution's disclosure statement, as well as the loan listing containing the following detailed information on each loan that is included in the disclosure statement:

- Census tract
- Loan amount
- Type of loan (e.g., FHA, VA, Conventional, etc.)
- Home improvement vs. mortgage indicator
- Occupant vs. non-occupant indicator
- 1-4 family vs. multiple family indicator
- Origination vs. purchase indicator
- Refinance indicator.

To facilitate this procedure, the institution should provide a loan listing containing loan data arranged in numerical order by census tract number and formatted in accordance with the disclosure statement. This will significantly reduce the time required to reconstruct a sample of the census tract lines from the disclosure statement.

In addition to the disclosure statement and loan listing, the examiner will require access to the best source of "ground truth" for loan information. Such sources could be manual or automated loan files, or application files in some cases.

3.2 AGGREGATION AUDIT PROCEDURES

Aggregation errors can occur either when data on loans are transferred from the loan files and entered on the loan listing, or when data from the loan listing are aggregated into line items on the disclosure report. Because of these two types of potential errors, an audit procedure for aggregation accuracy must necessarily involve two stages to permit checking for these two types of errors. The steps involved in the first stage of checking the accuracy of the loan listing are:

- Review loan selection and aggregation methods with institution personnel
- Select audit sample from loan listing
- Collect audit sample data from loan listing
- Compare audit sample data to that contained in loan files
- Reverse procedure and check sample data from loan file against loan listing.

The steps involved in the second stage, checking the accuracy of the aggregation of the items on disclosure statements are:

- Select sample census tracts for auditing
- Aggregate audit sample data on loan listing
- Compare and analyze aggregated loan data with disclosure statement.

The steps involved in each of these stages will be discussed at length in the sections that follow.

3.2.1 Audit of Accuracy of Loan Listing

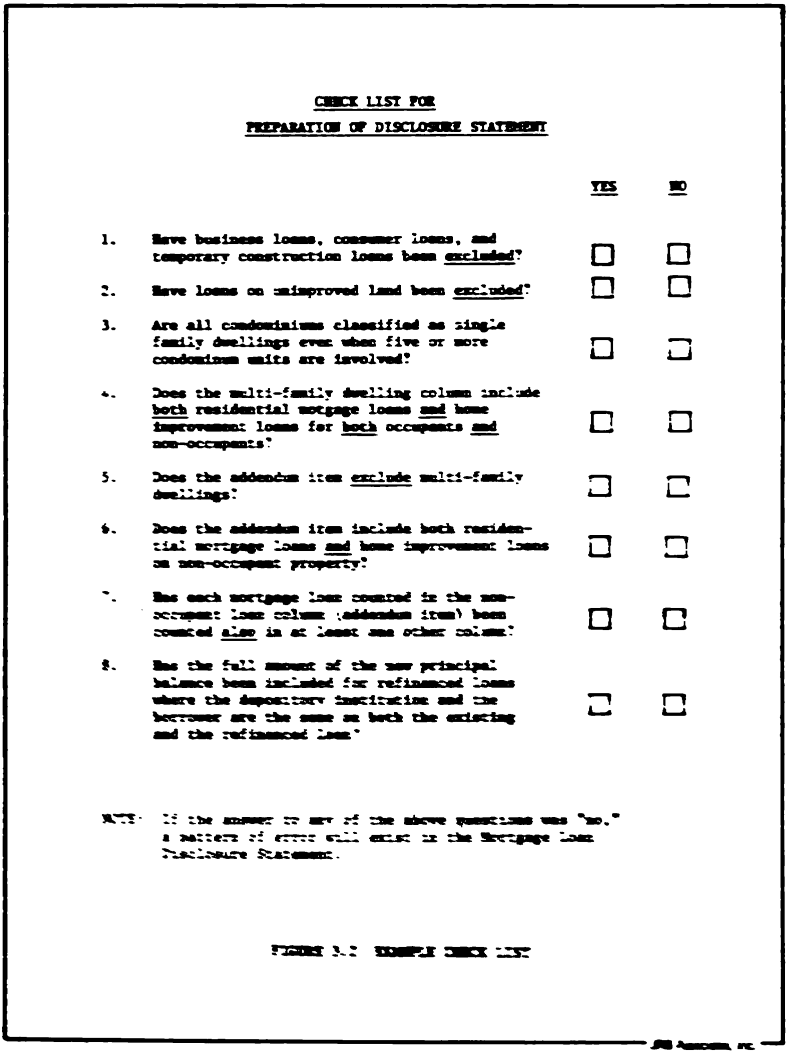
This stage involves an audit to determine if the loan listing has been correctly and accurately prepared from data for the loans contained in the institution's loan file.

The accuracy audit revealed that institutions make a variety of aggregation errors such as the inclusion of inappropriate loans, the aggregation of a loan into an improper census tract including the incorrect loan amount, failure to include non-occupant loans in all the appropriate columns in the disclosure statement and other types of errors The results of the accuracy audit are discussed in datail in a companion report entitled "Accuracy of Disclosure Statement Preparation."[4] Some of the errors are due to ambiguities in Regulation C. Examples of these are the criteria under which refinanced loans, assumed loans, and construction loans are to be included. A great deal can be learned about possible patterns of errors or misconceptions by means of a brief "procedures audit" with representatives of the institution at the beginning of the examination. In performing the procedures audit, examiners would discuss the criteria used by the institution in selecting loan information for inclusion in the disclosure statement. The check list shown in Figure 3.2 would greatly facilitate this discussion.

The information obtained in conjunction with the procedures audit may, in itself, reveal one or more major sources or patterns of error. If so, the examiner can focus on these to estimate the number and mount of loans involved.

Once the obvious error patterns have been assessed, the next step involves a "spot check" to determine 1) if only appropriate loans in the loan files appear on the loan listing, 2) if loans in the loan listing reflect those in the loan file, and 3) if the data characteristics of the loans contained in the two sources are both identical and appropriate for inclusion in the disclosure statement. To make these determinations it is necessary to perform a "spot check" in two directions verify the loan listing against the loan files, and verify the loan files against the loan listing. Thus, this stage of the audit has two phases, shown diagramatically in Figure 3.3.

Select Sample of Loans from Loan Listing: Because the procedures outlined here are intended to serve as a "spot check" of the loan listing accuracy, it is not necessary to select a large or statistically valid sample. Consequently, it is recommended that the examiner select a small number of loans (e.g., 10 loans) from the loan listing for purposes of comparison with the



CHECK LIST FOR
PREPARATION OF DISCLOSURE STATEMENT

		YES	NO
1.	Have business loans, consumer loans, and temporary construction loans been excluded?	☐	☐
2.	Have loans on unimproved land been excluded?	☐	☐
3.	Are all condominiums classified as single family dwellings even when five or more condominium units are involved?	☐	☐
4.	Does the multi-family dwelling column include both residential mortgage loans and home improvement loans for both occupants and non-occupants?	☐	☐
5.	Does the addendum item exclude multi-family dwellings?	☐	☐
6.	Does the addendum item include both residential mortgage loans and home improvement loans on non-occupant property?	☐	☐
7.	Has each mortgage loan counted in the non-occupant loan column (addendum item) been counted also in at least one other column?	☐	☐
8.	Has the full amount of the new principal balance been included for refinanced loans where the depository institution and the borrower are the same as both the existing and the refinanced loan?	☐	☐

NOTE: If the answer to any of the above questions was "no," a pattern of error will exist in the Mortgage Loan Disclosure Statement.

FIGURE 3.2 SAMPLE CHECK LIST

[illegible]

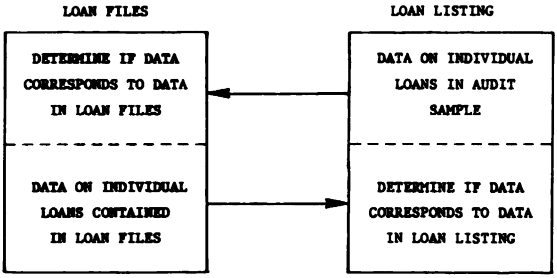

LOAN FILES
LOAN LISTING
DETERMINE IF DATA CORRESPONDS TO DATA IN LOAN FILES
DATA ON INDIVIDUAL LOANS CONTAINED IN LOAN FILES
DATA ON INDIVIDUAL LOANS IN AUDIT SAMPLE
DETERMINE IF DATA CORRESPONDS TO DATA IN LOAN LISTING

FIGURE 3.3 DIAGRAM OF TWO PHASES OF FIRST STAGE OF AGGREGATION ACCURACY AUDIT

loan files. These loans can be selected in any convenient manner, although it is preferable that an attempt be made to select loans of varied types amounts, and from different census tracts. After selecting the loans the examiner may either record the loan number, type, and amount on the Loan Listing Accuracy Form, presented here as Figure 3.4, or the examiner may simply mark the selected loans on the loan listing. The data from this sample of loans are to be compared with data from the loan file.

Compare Data from Loan Listing and Loan File: Next, the examiner would retrieve data from the loan file for each loan selected from the loan listing. The examiner would compare these data with similar data from the loan listing and make three determinations:

- Does the loan appear on the loan files?
- Is the loan appropriate for inclusion in the disclosure statement?
- Are the characteristics of the loan (e.g., amount, type, census tract) correctly recorded on the loan listing?

If the answers to these three questions are affirmative for a given loan; then, the loan is correctly reflected on the loan listing. If the answers are negative, a conflict exists and the data on the loan listing are not correct.

Reverse Procedure: The next step in the loan listing accuracy audit simply reverses the procedure so as to check the data in the loan file against the loan listing. In this procedure, the bottom half of the Loan Listing Accuracy Form (Figure 3.4) could be used. Again, ten loans, preferably varied, constitute the sample. This time, however, the data from the loan files are recorded first, and then compared to the loan listing. This is done for the purpose of making three determinations:

- Does the loan appear on the loan listing?
- Is the loan appropriate for inclusion on the disclosure statement?
- Are the characteristics of the loan (e.g., amount, type, census tract) as recorded on the loan file the same as they appear on the loan listing?

CHECK OF LOAN LISTING AGAINST LOAN FILE

LOAN LISTING DATA					LOAN FILE DATA									
Loan #	Census Tract	Type	Amount	Orig/ Purch.	Loan #	Y/N	Census Tract	Y/N	Type	Y/N	Amt.	Y/N	Orig/ Purch.	Y/N

CHECK OF LOAN FILE AGAINST LOAN LISTING

LOAN FILE DATA					LOAN LISTING DATA									
Loan #	Census Tract	Type	Amount	Orig/ Purch.	Loan #	Y/N	Census Tract	Y/N	Type	Y/N	Amt.	Y/N	Orig/ Purch.	Y/N

FIGURE 3.4 LOAN LISTING ACCURACY FORM

Once again, if the answers to these three questions are affirmative for a given loan, then the loan is correctly reflected on the loan listing. If the answers are negative indicating an error, the data on the loan listing are not correct.

Analysis: The final step of this stage of the aggregation accuracy audit is for the examiner to analyze the results obtained. This analysis should seek to answer the following questions:

- What percentage of loans in the sample were correctly recorded on the loan listing?
- Were there any consistent patterns of errors evident?

Combining the answers to these questions with the results of the procedures audit will allow the examiner to make an informed judgment as to the accuracy of the data on the loan listing. The second stage analysis can then be undertaken to assess the accuracy with which loans on the loan listing were aggregated as census tract line items on the disclosure statement.

3.2.2 Audit of Aggregation Accuracy

The purpose of the aggregation accuracy stage of the audit is to detect errors created during the process of aggregating the data on individual loans into the census tract line items. For purposes of the assessment of aggregation accuracy, the accuracy of geocoding is taken as given. Indeed, it is important to bear in mind that aggregation accuracy has nothing to do with geocoding accuracy. The aggregation accuracy audit procedures outlined here assume entries on the loan listing to be accurate. Based on this assumption, they detect instances where errors have been made in converting these loan listing entries to disclosure statement census tract items.

As in the previous section, the procedures outlined are not intended to create a sample allowing for statistically valid statements on the accuracy of disclosure loan listing statement aggregation. Rather, they are intended to serve as a means to "spot check" aggregation accuracy and uncover consistent patterns of errors. These "spot checks" allow the examiner to make informed judgments on the accuracy with which institutions are aggregating their disclosure statement.

Given a loan listing in which the loan data have been arranged in numerical order by census tract number, the process of assessing the accuracy of aggregation is simple. Essentially, this assessment involves the reconstruction of a sample of the census tract lines based upon data from the loan listing.

Select Sample of Census Tract: A small sample of three to five census tract lines would provide the examiner with a good indication of the degree of aggregation accuracy.

Reaggregate Census Tract Line: The examiner would use the data in the loan listing to reaggregate the data for the selected census tract lines. Assuming the loan listing data are: 1) arranged numerically by census tract and 2) complete in terms of the elements needed for the disclosure statement; then, reaggregation simply entails the use of a calculator to count the number and dollar value of loans in each category i.e., column) on the disclosure statement. If the loan listing data are not arranged numerically by census tract or are not complete; then, the examiner's job becomes more difficult. It would then be necessary to record the information for each census tract on a collection worksheet similar to the one shown in Figure 3.5. A set of suggested notations to be used in recording loan information on the collection worksheet is shown in Figure 3.6. If the data on the loan listing were not complete the examiner would have to obtain the missing information from the loan files. This step would be time-consuming; and it is a primary argument for requiring institutions to maintain a loan listing that is complete in terms of the elements needed for the disclosure statement.

LOAN INFORMATION SELECTION WORKSHEET

INSTITUTION: ____________________

CENSUS TRACT: ____________________

LOAN NUMBER	LOAN AMOUNT	TYPE OF FINANCING	HOME IMPROVEMENT	NON-OCCUPANCY	ORIGINATED/ PURCHASED	MULTI-FAMILY	CONSTRUCTION

FIGURE 3.5 LOAN INFORMATION SELECTION WORKSHEET

NOTATIONS TO BE USED ON
LOAN INFORMATION COLLECTION WORKSHEET

1. Indicate type of financing by:
   C - conventional
   F - FHA
   V - VA
2. Indicate refinanced loans which were originated by the institution to the same borrower by an R next to the type of financing indicator. For each refinanced loan, please indicate both the total amount of the refinanced loan, and the amount of the increase.
3. Indicate home improvement loans by a "yes" or "no."
4. For home improvement loans indicate whether the amount recorded on the work sheet is the net amount or the gross amount of the loan by the notation: N - net, G - gross, next to the amount.
5. Indicate non-occupancy by:
   N - non-occurpancy
   O - Occupancy
6. Indicate loan originations/purchases by:
   O - originations
   P - purchases
7. Indicate multi-family (5 or more units) by a "yes" or "no."
8. Indicate construction loans by a "yes" or "no."
9. For construction loans please indicate the duration of the loan in the construction column.
10. Please note the loans which should not be reported under HMDA because of an in appropriate purpose (e.g., business) by an asterisk and a footnote on the worksheet.

FIGURE 3.6 NOTATIONS TO BE USED ON LOAN INFORMATION COLLECTION WORKSHEET

Using data either from the loan listing or the Loan Information Collection Worksheet, the examiner would prepare the Aggregation Worksheet (Figure 3.7). The sole purpose of this worksheet is to place loans in the appropriate categories (i.e. disclosure statement column), thereby enabling the disclosure statement to be reaggregated. If the loan listing data were both complete and formatted to permit direct reaggregation, then it would not be necessary to complete this worksheet.

Compare Reaggregated Data with Disclosure Statement: Once the sample of census tract lines has been reaggregated these results would be compared against the data for the same census tract lines in the disclosure statement. The worksheet shown in Figure 3.8 is suggested as one means to make this comparison. Data are recorded from: the selected census tract line in the disclosure statement, and 2) from the loan listing or the aggregation worksheet. A difference in the number and amount of loans for any column in the two census tract lines indicates that the institution made one or more errors in the process aggregating the census tract line Dollar amount errors should be prefixed with plus sign (+) if there is over-reporting and with a minus sign (-) if there is under-reporting. The type and amounts of the errors should be recorded in the section of the worksheet entitled "Type of Error."

Determining the Aggregation Accuracy: Given the data on the number and dollar amount of errors for the selected census tracts the examiner can assess the relative amount of error by computing two ratios. The first ratio is calculated by dividing the number of errors per census tract by the number of loans per census tract to provide an index of the percentage error in terms of the number of loans For example, if there were two errors and 50 loans in a census tract, the percentage of loans in error would be 4 percent. Similarly, if there were two errors and ten loans in a census tract; the percentage of loans in error would be 20 percent.

The second ratio is calculated by dividing the total dollar amount of errors per census tract by the total dollar amount of loans per census tract to provide an index of the percentage error in terms of the amount of loans. In judging the seriousness of the error level the examiner should consider the ratios for both the number and amounts of errors.

INSTITUTION: ______________________
SMSA: ______________________
ORIGINATION OR PURCHASE: ______________________
CENSUS TRACT: ______________________

FHA, FMHA or VA LOANS (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS [Conventional] (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTGAGE LOANS (except on multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)		CONSTRUCTIONS 5 UNITS OR MORE	
NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.

FIGURE 3.7 AGGREGATION WORKSHEET

INSTITUTION: ______________________

CENSUS TRACT: ______________________

	A		B		C		D		E		F		G	
TYPE / SOURCE	FHA, FMHA or VA LOANS (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS [Conventional] (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTGAGE LOANS (except multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)		CONSTRUCtions - 5 UNITS OR MORE	
	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.	NO	$ AMT.
DISCLOSURE STATEMENT														
AUDIT TOTALS														

TYPE OF ERROR	TOTALS	AMOUNT
1) Errors of Census Tract Assignment ______		
2) Errors of Computation ______		
3) Inappropriate inclusion of loan ______		
4) Error of designation of loan as purchased or originated ______		
5) Errors in the designation of the type of loan ______		

LOAN COLUMN ON DISCLOSURE STATEMENT

ACTUAL COLUMN LOAN BELONGS IN	A	B	C	D	E	F	
A	---						
B		---					
C			---				
D				---			
E					---		
F						---	
G							---

FIGURE 3.8 AGGREGATION COMPARISON WORKSHEET

3.3 IMPROVED PROCEDURES

Institutions with manual systems should enter data for each loan in a log or journal on a continuous basis (e.g., as each loan is originated or monthly). The manual log or journal should be organized with one page or section for each census tract, and the format of the journal should be identical to the disclosure statement At the end of the year, the preparation of the disclosure statement merely involves summing the data for each census tract. Such a manual log is sufficient for the loan listing.

In automated systems, the mortgage master and home improvement master files are used as data sources From these files data on relevant loans are extracted, sorted, aggregated and printed to generate the disclosure statement. The preparation of a loan listing which indicates the component loans for each census tract could be easily generated through a simple print routine during the disclosure statement preparation cycle. Such a document would provide a means of assessing the aggregation accuracy of each census tract. If, through preliminary analysis the examiner identifies substantial discrepancies in the aggregation of mortgage disclosure data, the Supervisory Agent should discuss these manuals or automated procedures with the staff of the institution.

3.4 RESOURCES REQUIRED FOR EXAMINATION

The resources required for examination of the aggregation accuracy are correlated to the availability and accessibility of information to the examiner. The resources required are also closely tied to the desired degree of assurance that the error level found in the audit reflects the error level in the overall disclosure statement.

The availability of a loan listing that contains complete information on all loans, that is arranged in numerical order by census tract, and that is formatted in accordance with a disclosure statement will reduce the required examination time and effort by an order of magnitude. Assuming such a loan listing exists, an examiner would be able in most instances to perform the aggregation audit for an institution with a significant number of loans (i.e., >100 loans) in the following approximate times:

STAGE 1: Determine Accuracy of Loan Listing

Activity	Time (min.)
1) Discussion of selection and aggregation methods	30-60
2) Select and compare ten loans from master file with data on loan listing	30-60
3) Select and compare ten loans from loan listing with data on master file	30-60

STAGE 2: Determining Accuracy of Aggregation

Activity	Time (min.)
1) Reaggregate 3-5 census tracts using data from loan listing	30-180
2) Analyze Aggregation errors	15- 30

These estimates of examination time would vary substantially depending upon the availability and form of the requisite data, upon the number of loans in the selected census tracts and in the overall disclosure statement and on the experience of the examiner. It is clear, however, that even "spot checking" the aggregation accuracy of the 8700 depository institutions that are subject to the Home Mortgage Disclosure Act will impose a substantial added burden upon the regulatory agencies. The decision not to perform such a "spot check", however, means that disclosure statements will be at an unknown level of accuracy.

REFERENCES

1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Revisions to Regulation C," November 1979.

2. Savings Institutions Management Sciences, Inc., "Census Tract Address Coding Guide," Reuben H. Donnelly Corporation Marketing Division. SIMS is an affiliate of the U.S. League of Savings Associations.

3. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Methods to Improve Geocoding Accuracy," November 1979.

4. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Accuracy of Disclosure Statement Preparation," November 1979.

APPENDIX A

SAMPLE SIZE DETERMINATION

This appendix discusses the methodology used to determine the required sample size for auditing geocoding accuracy. This methodology was used to prepare Schedules A & B, in Appendix B, which show sample sizes for certain specific conditions. In this discussion the formula used to generate those tables is presented, along with a basic general discussion of the variables in that formula.

Sample size is a function of four variables:

- Population size (N)
- Maximum value of the population parameter to be estimated (p)
- Desired precision of the estimate (e)
- Level of confidence in the estimate (z).

They are combined in the following formula to give the sample size (n):

$$n = \frac{p\ (1-p)}{\frac{e^2}{z^2} + \frac{p\ (1-p)}{N}}$$

The actual derivation of this formula is outside the scope of this appendix, but it is based upon the normal distribution.

Population size clearly affects the sample size. As the population gets larger, the sample size needs to be larger in order to obtain the statistically equivalent estimate. However, this relationship is not linear, and a maximum sample size can be calculated leaving out the $\frac{p(1-p)}{N}$ term in the denominator. We have calculated limits to the sample size (shown below) for the eight cases specified by the values of the variables in Schedules A & B.

MAXIMUM SAMPLE SIZE

		e=2½%	e=5%
80% Geocoding Accuracy	95% confidence	984	246
	90% confidence	693	174
90% Geocoding Accuracy	95% confidence	554	139
	90% confidence	390	98

The value of the parameter (in this case geocoding accuracy) to be estimated also has a significant bearing on the size of the sample. First, think of the value as a decimal fraction rather than a percentage (this is how it is used in the computation) That value must be between 0.0 (none geocoded correctly) and 1.0 (all geocoded correctly). The closer the true value is to either extreme, the fewer the number of elements that have to be sampled to give an acceptable statistical picture.

The third variable in this formula is "e" or the desired precision of the estimate. This is entirely at the discretion of the sampler and depends upon what degree of precision he or she is willing to accept When random sample is taken and measured, there is a potential random error. When the precision is specified, the allowable error (hence the symbol "e") in the estimate is specified. A very small error, (e.g., 1%) as opposed to a large allowable error (e.g., 5%), results in a large sample size, all other variables being the same in both cases. This error is to be both added to and subtracted from the estimate to give a range or interval. For example, if 92 percent is the estimated geocoding accuracy, and the allowable error is five percent, the interval estimate is 87 percent to 97 percent.

The final variable determines the confidence level. It enters into the formula as "z which in statistical nomenclature is known as the standard score and is defined as the number of standard deviations to either side of the mean. Again, it is outside the scope of this appendix to fully develop the concepts of standard deviation and confidence levels. However, it is appropriate to make several basic statements.

The parameter to be estimated has one true value and that value is not subject to probability statements. What is subject to probability statements is the estimate of that parameter. The confidence level is an expression of the probability that the true value of the parameter has been estimated By narrowing the interval we reduce the probability and by broadening the interval we increase the probability. The "z" variable is related to the desired confidence limits.

Below is a table of values of "z" and corresponding confidence levels.

SELECTED STANDARD SCORES

"z"	Confidence Level
1	68.27%
1.645	90.00%
1.96	95.00%
2	95.45%
2.326	98.00%
2.576	99.00%
3	99.73%

Source: Statistical Analysis For Decision Making, Morris Hamburg,
Harcourt Brace Jovanovich, NY, 1977

Technical Note: The normal distribution that is used here is an approximation to the true hypergeometric distribution for geocoding accuracy. The approximation is best when the total number of loans is large. When the total number of loans is small, the approximation is not as reliable. A commonly used rule for estimating when the approximation is reliable is that both $np \geq 5$ and $n(1-p) \geq 5$.

REFERENCES

1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Revisions to Regulation C," November 1979.

2. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas -- Accuracy of Disclosure Statement Preparation," November 1979.

APPENDIX B

ALTERNATIVE APPROACH FOR DETERMINING THE SAMPLE SIZE FOR ASSESSING GEOCODING ACCURACY

This appendix presents an alternative approach for determining the sample size to be used for assessing the accuracy of geocoding. In this approach the examiner would first select the desired level of confidence and the desired level of error that is to be associated with the results of the accuracy examination. The examiner would, then, select the appropriate sample size on the basis of these two selected levels and other considerations.

Determining the Sample Size involves four steps. These are:

- Make an a priori estimate of institution's level of geocoding accuracy
- Determine the total number of loans made by the institution in the relevant SMSA
- Determine the confidence level to be used for sampling
- Determine the error range to be used in sampling.

Each of these steps will be discussed in turn.

A Priori Estimate: The first step in determining the sample size involves an a priori estimate by the examiner of the level of geocoding accuracy the examiner expects to find for the institution being examined The level of geocoding accuracy is estimated in terms of a percentage such as 90%, 85%, 80%, etc. This estimate is important for it will influence the size of the sample needed to assess the accuracy of geocoding. In general, the sample size required is reduced as the estimate of the expected level of accuracy increases.

This a priori estimate of geocoding accuracy will involve a subjective judgment on the examiner's part and will be based on information obtained on the Institution Geocoding Procedures Form. This judgement should be based on answers obtained to the following questions:

- Who in the institution performs the geocoding? Is it appraisers, underwriters, loan officers, clerks, or temporaries?
- What geocoding tools are used? Are they Census Tract Maps, Other Maps, Address Coding Guides, Automated Geocoding Programs?
- What time frame is used for geocoding? Is it done continuously or on a retrospective basis?

With experience, the examiner will learn to accurately and rapidly predict the level of geocoding accuracy. The examiner will discover, for example, that institutions using the optimal tools - Address Coding Guides - can be expected to obtain geocoding accuracy levels of 90%; whereas, those using maps can be expected to obtain low accuracy levels (e.g.,< 80%). Various factors relating the accuracy of geocoding are discussed in a companion report of this study, Methods to Improve Geocoding Accuracy.

The examiner will select a schedule of sample sizes based on the estimate of the institution's level of geocoding accuracy. Table B.1 presents a schedule which is to be used when the a priori estimate is of 90% geocoding accuracy. Table B.2 presents Schedule B which is to be used when an estimate of 80% is made. The methods and assumptions used to generate schedules A & B are discussed in detail in Appendix A. These methods can be used to generate additional schedules corresponding to other estimates. The examiner's estimate of geocoding accuracy should be recorded on the Geocoding Accuracy Audit Data Form (Figure B.1).

TABLE B.1 SCHEDULE A: INSTITUTIONS WITH ESTIMATED GEOCODING ACCURACY OF 90 PERCENT

NUMBER OF LOANS IN DISCLOSURE STATEMENT	NUMBER OF LOAN ADDRESSES IN SAMPLE			
	CONFIDENCE LEVEL (PERCENT)			
	95%		90%	
	ERROR RANGE (PERCENT)		ERROR RANGE (PERCENT)	
	2.5%	5%	2.5%	5%
10	EXAMINE ALL LOANS			
25				
50				
75		49		42
100	85	58		49
200	146	82	132	66
300	194	95	170	74
400	232	102	197	78
500	263	108	219	82
600	288	112	236	84
700	309	115	250	86
800	327	118	262	87
900	343	120	271	88
1,000	356	121	280	89
1,500	404	127	309	91
2,000	433	129	326	93
2,500	453	131	337	94
3,000	467	132	345	94
3,500	478	133	351	95
4,000	486	134	355	95
4,500	493	134	359	95
5,000	498	135	361	96
6,000	506	135	366	96
7,000	512	136	369	96
8,000	517	136	372	96
9,000	521	136	373	96
10,000	524	136	375	96
15,000	534	137	380	97
20,000	538	137	382	97

TABLE B.2 SCHEDULE B: INSTITUTIONS WITH ESTIMATED GEOCODING ACCURACY OF 80 PERCENT

NUMBER OF LOANS IN DISCLOSURE STATEMENT	NUMBER OF LOAN ADDRESSES IN SAMPLE			
	CONFIDENCE LEVEL (PERCENT)			
	95%		90%	
	ERROR RANGE (PERCENT)		ERROR RANGE (PERCENT)	
	2.5%	5%	2.5%	5%
10	EXAMINE ALL LOANS			
25				
50				
75		57		52
100		71		63
200	166	110	155	93
300	229	135	209	110
400	284	152	254	121
500	331	165	290	129
600	373	174	322	134
700	409	182	348	139
800	441	188	371	142
900	470	193	391	145
1,000	496	197	409	148
1,500	594	211	474	155
2,000	659	219	515	159
2,500	706	224	542	162
3,000	741	227	563	164
3,500	768	230	578	165
4,000	789	232	590	165
4,500	807	233	600	166
5,000	822	234	608	167
6,000	845	236	621	168
7,000	862	238	630	169
8,000	876	239	637	170
9,000	887	239	643	170
10,000	895	240	648	170
15,000	923	242	662	171
20,000	937	243	670	172

JRB Associates, Inc.

GEOCODING ACCURACY

A Priori Estimate of Geocoding Accuracy: ______________ %

Total Number of Loans on Loan Roster: ____________________

Level of Confidence and Error Range Selected:

Level of Confidence: 90% _____ 95% _____
Error Range 2.5% _____ 5% _____

Audit Sample Size: __________

Number of Correct Census Tract Assignments: ____________

Number of Incorrect Census Tract Assignments: ____________

Percentage of Correct Census Tract Assignments: __________

Percentage of Incorrect Census Tract Assignments: _________

FIGURE B.1: GEOCODING ACCURACY AUDIT DATA FORM

Determine Total Number Of Loans: The next step in determining the audit sample size is to obtain the institution's loan listing and determine from the loan listing the total number of mortgage and home improvement loans made that year in the relevant SMSA. Again, the examiner should note the total number of loans contained on the loan listing on the Geocoding Accuracy Audit Data Form.

Determine Confidence Level And Error Range: The third step in determining the size of the audit sample is for the examiner to decide upon the confidence level and error limit suitable for the audit. Values for the confidence level and an error limit are needed because the accuracy audit uses a sample of only a limited subset of the loans on the total loan roster. The error limit establishes a range or interval estimate within which the value for geocoding accuracy would fall if all loans were sampled. The confidence level establishes the risk that the value derived for geocoding accuracy based on the sample falls outside the error limit established. An error range of 2.5 percent and a confidence limit of 95 percent mean, in other words, that there is a 5 percent risk that the actual value for geocoding accuracy will fall outside 2.5 percent of either side of the value derived from the sample.

Both schedule A and B offer four combinations of confidence levels and error limits: a 90 or 95 percent confidence level each with possible alternatives of a 2½ or 5 percent error limit. Depending upon the examiner's choice among these four variables, the sample size used in conducting the audit will allow the following type of statement to be made based on a finding of, say, 88 percent accuracy:

- It is possible to state, with a 95 percent confidence level, that the institution's actual geocoding accuracy lies between 85.5 percent and 90.5 percent (i.e., 88% ± 2.5%).

It will be up to the examiner, of course, to select the confidence level and error suitable to his purposes. (A technical discussion of statistical factors is presented in Appendix A.) The examiners choices made should be noted on the Geocoding Accuracy Audit Data Form.

select the next higher value or interpolate linearly by using the two surrounding values. The number of loan addresses to be in the sample is not shown in several instances where the number of loans in the disclosure statement is small. In these instances the statistical procedures discussed in Appendix A are not applicable and the examiner should examine all loans. Once again, the audit sample size determined should be recorded on the Geocoding Accuracy Audit Form.

It should be noted that the sample sizes shown on Schedules A & B are generated to permit statistically significant statements to be made based on the results of the example. The sample sizes are in some cases quite large, and performing such an audit may be beyond the scope of the examiner's time. In such instances, the examiners may choose to audit a smaller sample size. If so, the procedures presented in Section 2.2.2 are applicable.

Having determined the audit sample size the examiner would now return to Section 2.2.3 for the remainder of the geocoding examination procedure.

ANALYSIS OF HOME MORTGAGE
DISCLOSURE ACT DATA
FROM THREE STANDARD
METROPOLITAN STATISTICAL AREAS

REVISIONS TO REGULATION C

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

TABLE OF CONTENTS

Page

FOREWORD i

SUMMARY iii

1. INTRODUCTION 1-1
    1.1 Purpose 1-1
    1.2 Scope and Assumptions 1-1
    1.3 Methodology 1-3

2. REVISIONS TO REGULATIONS 2-1
    2.1 Methods by Which Problems Were Identified 2-1
    2.2 Preparation of Disclosure Statements - Problems and Solutions 2-2
        2.2.1 Geocoding Problems and Solutions 2-2
        2.2.2 Aggregation Problems and Solutions 2-6
        2.2.3 Audit Trail Problem and Solution 2-13
    2.3 Public Notice, Availability, and Copying - Problems and Solutions 2-15
        2.3.1 Public Notice Problems and Solutions 2-15
        2.3.2 Availability Problem and Solution 2-17
        2.3.3 Copying Problem and Solution 2-18
        2.3.4 Certification Problem and Solution 2-19
    2.4 Compiling or Comparing Disclosure Statements - Problems and Solutions 2-20
        2.4.1 Standard Format and Contents 2-20
    2.5 Supplementary Guidelines 2-24

Reference R-1

Appendix A A-1

Appendix B B-1

LIST OF TABLES AND FIGURES

Page

TABLE S.1: Summary of Revisions and Suggestions iv

TABLE 1.1: Methodology for Preparing Management Report for Revision to Regulation C 1-4

FIGURE 2.1: Example Check-Off List 2-26

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements, identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associatos has conducted Phases 2, 3, and 4. This report is one of twelve roports prepared under Phases 2, 3, and 4 of the study. These roports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of this report is to present the study findings and conclusions on proposed revisions to Regulation C (12CFR 203), "Home Mortgage Disclosure."

SCOPE AND METHODOLOGY

In performing this part of the study, our objective was to develop suggestions for revisions to Regulation C only in response to problems related to the preparation, collection and compilation of the disclosure statements called for in the regulation. An analysis of the value or usefulness of the Home Mortgage Disclosure Act, upon which Regulation C is based was outside the scope of this report. These issues, which are the basis for the overall study, are addressed in the companion reports, "Utility of the Home Mortgage Disclosure Act,"[1] and the "Executive Summary."[2] Where changes in Regulation C also required changes to the Act, changes to both were considered and suggested. This was done, however, only where these changes did not alter the fundamental purpose of the Act.

During the course of the study, numerous disclosure statements were reviewed. This review included an analysis, in considerable detail, of the contents of the statements, and discussion with representatives from the depository institutions of problems associated with the preparation of the disclosure statements. These discussions, combined with a study of the Regulation itself, yielded a set of problems that are itemized and discussed briefly in this report.

FINDINGS AND CONCLUSIONS ON REVISIONS TO REGULATION C

The suggested revisions to Regulation C are summarized in Table S.1 under four major headings: Preparation of Disclosure Statements; Public Notice,

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
ATION OF OSURE STATEMENTS					
ing ping property ses to census tracts)	The references to OMB as the source for definitions of SMSA boundaries are now obsolete. The Department of Commerce now has responsibility and authority for definitions of SMSA boundaries.	Yes	Yes	Delete references to OMB and specify the Department of Commerce as the source of definitions for SMSA boundaries.	None
	Regulation C does not address the use of updated definitions of census tracts and their boundaries.	N/A	Yes	Add discussion of the use of the new 1980 census tracts and their boundaries.	Minimal cost for update of geocoding tools.
	Geocoding tools are not defined or discussed.	N/A	No	Include discussion of geocoding methods and tools in Supplementary Guidelines.	None
	No method has been provided for resolving problem addresses in tracted areas.	N/A	Yes	Require that addresses not in geocoding tools be itemized by zip codes.	None
gation ling disclosure ment)	Types of loans that should be excluded are sometimes included even where Regulation C is definitive and explicit.	Yes	Yes	Supplementary Guidelines to clarify loans to be included. Define temporary financing, clarify applicable construction and refinanced loans	Reduce Confusion
	Non-occupant loans are often not also included under at least one other column.	N/A	Yes	Clarify reporting on non-occupant loans; differentiate non-occupant mortgage & home improvement loans.	None
	Aggregation errors: 1) loans in the wrong census tract line 2) including loans not meeting Regulation C criteria 3) designating loans under wrong category 4) incorrect computation.	N/A	N/A	Step-by-step compilation procedures included in Supplementary Guidelines.	None
Trail from loan roster to sure statement)	Examiners experience difficulties in tracing aggregated disclosure data back to individual loans.	No	Yes	Require retention of listing of loans included in disclosure statement. Listing to include loan number, census tract, address type of loan and dwelling, amount.	Minimal if data base is automated; moderate change in procedures if manual.
C NOTICE, AVAILABILITY, OPYING					
c Notice	Requirements for public notice provide for only minimal coverage.	Yes	Yes	Require periodic notices mailed in savings account statements and continuously posted notice in loan department.	Cost of printing notices.
	Posted notice frequently conveys too little information	No	Yes	Specify content of posted notice to designate location of statement and individual to contact.	Cost of printing placards.
ability	Availability of disclosure statement required at home office and only one branch/location in SMSA, possibly denying reasonable access to public in outlying areas.	Yes	Yes	Require availability of statement at a minimum at all branches required to have CRA report.	Additional duplication costs.
ng	Regulation C does not specify whether "copying" of statement is manual transcription or photocopying.	No	Yes	Define "copying" to include photocopying if institution makes such services available to its patrons.	None
fication	It is difficult to determine retrospectively who was responsible for compiling disclosure statement.	No	Yes	Require signature at end of statement, with certification of completeness and accuracy	None
LING OR COMPARING OSURE STATEMENTS					
ard Format and nt	Format and content of statements produced by some institutions are substantially different from Regulation C guidelines.	N/A	Yes	Require institutions to prepare statement in standard format.	Minimal except for current state exemptions
rences in Fiscal	Reporting currently required on fiscal year basis. Differences in fiscal years make it difficult to compare statements or generate summary reports that aggregate institutions.	Yes	Yes	Require all institutions to report on a calendar year basis.	Small, unless state-chartered institutions are required by state to report on a fiscal year basis.
Exemptions	Exemptions have been granted in states whose disclosure statements are substantially different from Regulation C.	No	No	Agencies define "substantially similar" and require strict compliance with definition prior to granting exemption.	Increased difficulty in negotiating state exemptions
EXITY OF ATING					
ementary Guidelines	Regulation C is complex and is not an adequate basis for an operational procedure.	N/A	N/A	Develop supplementary guidelines that explain the regulations, provide examples, and emphasize points that have been misunderstood in the past.	None

TABLE S.1: SUMMARY OF REVISIONS ,AND SUGGESTIONS

Availability, and Copying; Compiling or Comparing Disclosure Statements; and Complexity of Regulations. The fourth major heading in the table, Complexity of Regulations, is discussed first because of its impact on suggestions made under the other three headings. This section summarizes problems for which the development of supplementary guidelines to Regulation C appear to be the most practical solution.

Complexity of Regulations:

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
COMPLEXITY OF REGULATIONS					
Supplementary Guidelines	Regulation C is complex and is not an adequate basis for an operational procedure.	N/A	N/A	Develop supplementary guidelines that explain the regulations, provide examples, and emphasize points that have been misunderstood in the past.	None

During the course of our study, numerous errors made in the preparation of disclosure statements due to misinterpretations of Regulation C were found. The preparation of a disclosure statement that is consistent with the definitions and requirements of Regulation C entails dozens of decisions and steps each with a concomitant opportunity to introduce errors. It is felt that because of the complexity of Regulation C, depository institutions are unlikely to prepare disclosure statements that are completely consistent with the definitions and requirements of the regulation unless they have and follow carefully prepared written guidelines or instructions for their preparation. Such guidelines should not be part of Regulation C. Instead, it is suggested that supplementary guidelines would clarify areas of potential misunderstanding, and provide suggested instructions for preparation of the disclosure statements.

Preparation of the Disclosure Statements:

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
PREPARATION OF DISCLOSURE STATEMENTS					
Geocoding (Assigning property addresses to census tracts)	The references to OMB as the source for definitions of SMSA boundaries are now obsolete. The Department of Commerce now has responsibility and authority for definitions of SMSA boundaries.	Yes	Yes	Delete references to OMB and specify the Department of Commerce as the source of definitions for SMSA boundaries.	None
	Regulation C does not address the use of updated definitions of census tracts and their boundaries.	N/A	Yes	Add discussion of the use of the new 1980 census tracts and their boundaries.	Minimal cost for update of geocoding tools.
	Geocoding tools are not defined or discussed.	N/A	No	Include discussion of geocoding methods and tools in Supplementary Guidelines.	None
	No method has been provided for resolving problem addresses in tracted areas.	N/A	Yes	Require that addresses not in geocoding tools be itemized by zip codes.	None
Aggregation (Compiling disclosure statement)	Types of loans that should be excluded are sometimes included even where Regulation C is definitive and explicit.	Yes	Yes	Supplementary Guidelines to clarify loans to be included. Define temporary financing, clarify applicable construction and refinanced loans	Reduce Confusion
	Non-occupant loans are often not also included under at least one other column.	N/A	Yes	Clarify reporting on non-occupant loans; differentiate non-occupant mortgage & home improvement loans.	None
	Aggregation errors; 1) loans in the wrong census tract line 2) including loans not meeting Regulation C criteria 3) designating loans under wrong category 4) incorrect computation.	N/A	N/A	Step-by-step compilation procedures included in Supplementary Guidelines.	None
Audit Trail (Link from loan roster to disclosure statement)	Examiners experience difficulties in tracing aggregated disclosure data back to individual loans.	No	Yes	Require retention of listing of loans included in disclosure statement. Listing to include loan number, census tract, address type of loan and dwelling, amount.	Minimal if data base is automated; moderate change in procedures if manual

Three topics and eight problem areas associated with the preparation of disclosure statements were identified. Four suggestions are made in conjunction with the first topic, geocoding. The first suggestion is to specify the U.S. Department of Commerce as the current source for the definition of SMSA boundaries. The second suggestion is to augment the discussion on the 1970 census tracts with a discussion on the new 1980 census tracts. The third suggestion, relating to the use of improper geocoding tools, derives from problems found in Chicago wherein many institutions were using improper geocoding tools. It is suggested that the use of geocoding tools be addressed in the supplementary guidelines rather than in Regulation C. The fourth suggestion is to revise the regulation to provide that in instances where the available addresses coding guides or other acceptable geocoding tools do not enable a property address to be geocoded to a census tract; then, institutions must either geocode using other means or itemize the loan by the ZIP code of the property address.

Three suggestions are made in conjunction with the second topic, aggregation. The first suggestion is to revise Regulation C to define explicitly the criteria for temporary financing, refinanced loans and assumed loans and, in addition, to amplify these criteria in the supplementary guidelines. These two steps will reduce problems found during the accuracy analysis. The second suggestion addresses two problems associated with the nonoccupant addendum item in the disclosure statement. One problem is that many institutions do not include nonoccupant loans in the other columns, in spite of the fact that Regulation C explicitly requires that this be done. The other problem is the inability to differentiate between nonoccupant mortgage loans and nonoccupant home improvement loans. The first problem should be addressed in the supplementary guidelines, and the second requires a revision to the regulation. The final suggestion addresses the problem of aggregation errors. This major accuracy problem should be addressed in the supplementary guidelines and in compliance examinations by a discussion of the types of procedures that are efficient and accurate and those that are not.

An important study finding was that one of the most significant ways in which the quality of mortgage disclosure data could be improved is to revise Regulation C to require depository institutions to maintain a listing of the loans included in the disclosure statement. An accurate and convenient method for identifying the loans comprising a disclosure statement is a prerequisite to the validation of its contents. The suggested listing of loans should be provided in numerical order by census tract, and data for each loan should include the loan number, census tract, type of loan, type of dwelling, property address and the loan amount. This loan listing is essential to a cost effective examination of the contents of disclosure statements and the lack of such listings is a factor contributing to the inaccuracies in disclosure statements.

Public Notice, Availability, and Copying:

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
PUBLIC NOTICE, AVAILABILITY, AND COPYING					
Public Notice	Requirements for public notice provide for only minimal coverage.	Yes	Yes	Require periodic notices mailed in savings account statements and continuously posted notice in loan department.	Cost of printing notices.
	Posted notice frequently conveys too little information	No	Yes	Specify content of posted notice to designate location of statement and individual to contact.	Cost of printing placards.
Availability	Availability of disclosure statement required at home office and only one branch/location in SMSA, possibly denying reasonable access to public in outlying areas.	Yes	Yes	Require availability of statement at a minimum at all branches required to have CRA report.	Additional duplication costs.
Copying	Regulation C does not specify whether "copying" of statement is manual transcription or photocopying.	No	Yes	Define "copying" to include photocopying if institution makes such services available to its patrons.	None
Certification	It is difficult to determine retrospectively who was responsible for compiling disclosure statement.	No	Yes	Require signature at end of statement, with certification of completeness and accuracy	None

Four topics and five problems associated with public notice, availability, and copying were identified. Two suggestions associated with public notice are made. The first is to require depository institutions to post a permanent notice regarding the availability of the disclosure statement, and for institutions with savings account statements to require periodic notices be mailed in savings account statements. The second is to require the notice to specify the location of the disclosure statement and the responsible institution representative to contact. To improve access to the disclosure statement, it is suggested that it be made available at all branches required to have the CRA statement. It is suggested that copying privileges be clarified, and that institutions be required to provide photocopies (for an optional charge) if these services are normally made available. The final suggestion is to require the responsible individual to certify "to the best of his or her ability" that the disclosure statement is complete and accurate.

The suggested revisions on public notice, availability, and copying are pertinent only to the disclosure aspects of HMDA, and the study findings that show there has been little request by the public for disclosure statements should be carefully considered.

Compiling or Comparing Disclosure Statements:

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
COMPILING OR COMPARING DISCLOSURE STATEMENTS					
Standard Format and Content	Format and content of statements produced by some institutions are substantially different from Regulation C guidelines.	N/A	Yes	Require institutions to prepare statement in standard format.	Minimal except for current state exemptions
Differences in Fiscal Years	Reporting currently required on fiscal year basis. Differences in fiscal years make it difficult to compare statements or generate summary reports that aggregate institutions.	Yes	Yes	Require all institutions to report on a calendar year basis.	Small, unless state-chartered institutions are required by state to report on a fiscal year basis.
State Exemptions	Exemptions have been granted to states whose disclosure statements are substantially different from Regulation C.	No	No	Agencies define "substantially similar" and require strict compliance with definition prior to granting exemption.	Increased difficulty in negotiating state exemptions

Three problems associated with the compilation or comparison of disclosure statements were identified. The first suggestion is to require institutions to prepare the disclosure statement in a standard format. Standard disclosure statement formats and contents are the only means by which public citizens, officials, or public interest groups can readily compile and meaningfully interpret the disclosure information for the depository institutions in an SMSA. Standardization of even such seemingly small aspects as rounding to the nearest $1,000 can substantially reduce compilation difficulties. The second suggestion is to require all institutions to report on a calendar year basis. This revision will have little impact on banks and three-fourths of the savings and loan associations that currently have fiscal year closures on December 31. The revision would add a small burden to approximately one-fourth of the savings and loan associations with fiscal closures other than December 31, but the benefits derived from having a common basis for comparison and interpretation appear to outweigh the small added burden. The third suggestion is that, in granting exemptions to states, the standard formats and contents specified in Regulation C be required. This would eliminate the existing problem in which the dissimilarities between state and Federal disclosure statements make compilation onerous and interpretation impossible.

CHAPTER 1

INTRODUCTION

1.1 PURPOSE

The purpose of this report is to present the study findings and conclusions on proposed revisions to Regulation C, (12CFR 203) "Home Mortgage Disclosure."

1.2 SCOPE AND ASSUMPTIONS

The proposed revisions discussed in this management report are based on the following three assumptions:

1) The Home Mortgage Disclosure Act of 1975 (hereafter referred to as the "Act") would continue to provide the authority for Regulation C and the proposed revisions.

2) The stated purpose of the Act would continue to be "to provide the citizens and public officials of the United States with sufficient information to enable them to determine whether depository institutions are filling their obligations to serve the housing needs of the communities and neighborhoods in which they are located and to assist public officials in their determination of the distribution of public sector investments in a manner designed to improve the private investment environment."

3) The scope of this report would include suggestions for changes in the Act where these changes were consistent with the purpose of the Act as stated in assumption 2 above.

As indicated by Assumption 1, analysis for this report was predicated on the continued existence of the Act as the authority for Regulation C. An analysis of the value or usefulness of the Act, itself, was outside the scope of this report. These issues, which are the basis for the overall study, are addressed in the companion reports "Utility of the Home Mortgage Disclosure Act,"[1] and the "Executive Summary."[2]

As indicated by Assumption 2, the analysis was based on the premise that the purpose and scope of the Act would remain unchanged. It was assumed that the purpose of the Act would remain the disclosure of information by depository institutions to citizens and to public officials and that the scope of this information would be delimited to mortgage loan data related to residential real property located within an SMSA.

The scope of the Act, however, could potentially be extended in at least the following four ways:

1) Adding other forms of mortgage loan information (e.g., loan applications, aggregate portfolio)
2) Adding additional loans not related to housing (e.g., business loans)
3) Adding other types of organizations (e.g., mortgage bankers)
4) Adding geographical coverage to non-SMSA areas.

These extensions are outside of the scope of this report because they involve changes in the fundamental purpose and scope of the Act. These issues are discussed in the companion study report, "Utility of the Home Mortgage Disclosure Act."[1]

As indicated by Assumption 3, an analysis of changes to the Act itself was undertaken only where these changes were within the existing purpose and scope of the Act and where it was felt that these changes merited consideration. Such proposed changes are based upon identified problems whose solutions require revisions to both the Act and Regulation C.

In conducting our study, dozens of disclosure statements were reviewed and discussions of reporting problems with representatives from many depository institutions were held. It was found that certain types of errors were being made in the preparation of disclosure statements even where Regulation C [illegible] definitive and explicit. The study indicates that the preparation of a disclosure statement that is consistent with the various definitions and requirements of Regulation C entails dozens of decisions and steps which provide ample opportunity for error even by those who study it carefully. It is felt that Regulation C is sufficiently complex to warrant the preparation of guidelines explaining how to prepare the disclosure statement. Two ways to implement this conclusion are possible: expand Regulation C or develop supplementary guidelines. Clearly, Regulation C should be clear and concise and should provide definitions and requirements but not techniques. Consequently, the proposed revisions to the regulation presented in this report do not include explanatory guidelines. Instead, it is recommended that supplementary guidelines to clarify the regulation be prepared. These guidelines would clarify areas of potential misunderstanding, and provide suggested instructions for preparation of the disclosure statements.

1.3 METHODOLOGY

The methodology used in developing the proposed revisions to Regulation C is outlined in Table 1.1. As shown in the table, the proposed revisions are based upon a set of problems and issues identified during all three phases of the study. The problems were grouped and developed in three categories described in steps 1.1 - 1.3. Under the first problem category, problems encountered by depository institutions during their preparation of the disclosure statements were identified. Under the second problem category, problems encountered by the public in the light of current methods of public notice, access, and copying privileges were identified. The problems in the third category are based upon the premise that disclosure statements should be prepared in a manner that will permit the public or public officials to compare or compile them consistently and with minimum difficulty.

TABLE 1.1: METHODOLOGY FOR PREPARING THE MANAGEMENT REPORT FOR REVISION TO REGULATION C

Step	Method Used
1. Identify problems and issues associated with Regulation C	The problems and issues were developed by means of the following four methods:
1.1 Problems in preparing the disclosure statements	Interviews with personnel from depository institutions as part of the accuracy audits and an analysis of the accuracy of the information in the disclosure statements from the three SMSAs in the study
1.2 Problems in public notice, availability, and copying	Problems identified while obtaining disclosure statements from depository institutions and from an analysis of Regulation C
1.3 Problems in comparing or compiling disclosure statements from many depository institutions in the same SMSA	Problems identified while compiling disclosure statements during the completeness phase of the study.
1.4 An issue relating to the contents of disclosure statements	An analysis of the problems associated with disclosure of purchased loans in the current disclosure statements.
2. Identify and analyze one or more solutions for each problem or issue	Based upon experience from analysis and discussions with personnel from the FHLBB, FDIC, and depository institutions.
3. Review intermediate findings with the FHLBB and FDIC personnel	Performed jointly in several informal working sessions
4. Prepare draft report	Prepared by JRB project personnel
5. Submit draft report to the FHLBB and FDIC for review and comment	JRB submits report, and the FHLBB and FDIC perform a review and prepare comments
6. Review of comments with the FHLBB and FDIC	Performed jointly in a review session
7. Prepare final report	Prepared by JRB project personnel

CHAPTER 2

REVISIONS TO REGULATIONS

This chapter presents a discussion of proposed revisions to Regulation C and to the Home Mortgage Disclosure Act of 1975 where such changes are not in conflict with the purpose of the Act. The following topics are covered in this discussion:

- Section 2.1: Methods by Which Problems were Identified
- Section 2.2: Preparation of Disclosure Statements - Problems and Solutions
- Section 2.3: Public Notice, Availability and Copying - Problems and Solutions
- Section 2.4: Compiling or Comparing Disclosure Statements - Problems and Solutions
- Section 2.5: Supplementary Guidelines

2.1 METHODS BY WHICH PROBLEMS WERE IDENTIFIED

During the course of our study, an assessment was made of the accuracy with which disclosure statements were being prepared in the three SMSAs of the study. Interviews were conducted with representatives of 44 depository institutions to discuss problems associated with the preparation of the Federal and state disclosure statements. In addition, information from numerous disclosure statements within the three SMSAs were compiled, aggregated, and compared. During this process, problems due to differences in the formats, reporting periods, and contents of the statements were encountered. Finally, 44 depository institutions were visited to obtain disclosure statements in the same manner that a person from the general public would make visits to obtain the statements. The experience from these visits combined with observations made during our visits to depository institutions for accuracy audits provided insights into the problems facing private individuals in locating and obtaining disclosure statements.

The problems identified in this report are primarily based upon our findings in the three SMSAs of the study (i.e., Buffalo, Chicago, and San Diego) rather than upon a national sample. In addition these three SMSAs are located in states that were granted exemptions from Federal reporting.* This gave us added insight into the problems associated with state disclosure statements. While recognizing these limitations on the scope of the study, it is felt that the problems identified are representative of those in the other states and SMSAs.

2.2 PREPARATION OF DISCLOSURE STATEMENTS - PROBLEMS AND SOLUTIONS

During the course of our study, a variety of problems associated with the preparation of disclosure statements were identified. These problems can be classified as follows:

- Geocoding (i.e., assigning property addresees to census tracts)
  - Source of census tract definitions
  - Geocoding is not discussed in Regulation C
  - Method of treating problem addresses
- Aggregation (i.e. compiling disclosure statement)
  - Inclusion of correct vs. incorrect loans
  - Addendum item
  - Compilation errors
- Audit Trail (i.e., providing listing of loans comprising disclosure statements)

2.2.1 Geocoding Problems and Solutions

Regulation C: Regulation C states that mortgage loan data in each SMSA are to he itemized by census tract in a format similar to the specimen form HMDA 1 which is included in the regulation (see Appendix A). The regulation states that the applicable SMSAs are those defined by the Office of Management and Budget (OMB) to be in effect on June 28, 1976, or on the first day of the fiscal year for which an institution is reporting. The applicable census tract numbers and boundaries are those appearing on the census tract maps in the series "1970 Census of Population and Housing CENSUS TRACTS, Final Reports, PHC (1) Series" prepared by the Bureau of Census, United States Department of Commerce. The depository institutions are permitted to use maps, directories, or computer programs that have more recent definitions than those specified in the June 28, 1976 OMB information.

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* The exemption for the State of Illinois was rescinded during the course of the study as a result of the ruling made by the Illinois Supreme Court.

Problems and Solutions: We identified the following four problems associated with Regulation C related to geocoding:

1) Reference to OMB is obsolete
2) No reference to updated census tracts
3) No discussion of geocoding methods and tools in Regulation C
4) No method for treating problem addresses in tracted areas

We examined the possibility of revising Regulation C to address each of the four geocoding problems. In the following paragraphs, we recommend that revisions to Regulation C be considered to eliminate problems 1, 2, and 4 and that the remaining problem (i.e., problem 3, discussion of geocoding methods and tools) be addressed in the proposed supplementary guidelines to the regulations.

Problem 1 - Reference to OMB is obsolete: The responsibility and authority for designating and defining SMSAs was transferred from the Office of Management and Budget to the Department of Commerce.[3] The responsibility for definitions of census tract boundaries remains with the Bureau of Census, Department of Commerce.

Solution: We suggest that Regulation C be revised to delete references to OMB and to specify the Department of Commerce as the source of definitions for SMSA boundaries.

Problem 2 - No Reference to Updated Census Tracts for 1980: In Section 203.4, Paragraph (b)(4), Regulation C discusses the use of updated definitions of SMSA boundaries, but it does not discuss the use of updated definitions of census tracts and their boundaries. This omission leaves unclear the way new census tracts (i.e. those created during the 1980 census) are to be treated. Since the Bureau of Census modifies census tracts only every 10 years at the time of each new census, this problem has not occurred to date. However, following the 1980 census new tracts will be formed and these will have an impact on geocoding requirements and activities.

Solution: We suggest that Regulation C be revised to discuss the use of the new 1980 census tracts and their boundaries.

Problem 3 - No Discussion on Geocoding in Regulation C: Although Regulation C defines the governmental source for definitions of SMSA, census tract and ZIP code boundaries as well as the requirement to be met by depository institutions in the geocoding of property addresses to census tracts, or ZIP codes, it does not define or discuss the methods or tools to be used to perform the geocoding. The materials provided by the Bureau of Census (e.g. PHC (1) series) are neither intended nor appropriate for geocoding addresses to census tracts Furthermore, no geocoding methods or tools are provided at all by the Federal government. Consequently, the depository institutions have been forced to rely on methods and tools available from commercial sources since it would be prohibitively costly for a depository institution to develop its own. Most depository institutions either purchase commercially available address coding guide directories or use a service bureau to geocode their loans. A few use other geocoding means such as maps.[4] The accuracy with which geocoding is performed is a function of the available tools and the skill and care with which they are used.

Investigations undertaken in the Accuracy phase of the study revealed, for example, that 35 percent of the institutions in the Chicago SMSA (i.e., 9 of 26 institutions) achieved unacceptable accuracy levels below 80 percent. The accuracy levels of these institutions ranged from 42.5 to 78 percent.

Two reasons account for the low accuracy levels achieved by 9 of the 26 sampled institutions in Chicago. Six of the nine relied solely on census tract maps or other maps to perform geocoding. Such maps, by themselves, are not adequate for geocoding. Three of the nine either did not use address coding guides properly or did not accurately record and maintain the results of their geocoding of addresses to census tracts.[5]

Solution: We are not in a position to suggest that Regulation C be revised to address geocoding methods. If, on fundamental grounds, a regulation should define what is to be done but not how it is to be done, then it is not appropriate for Regulation C to discuss methods such as geocoding. Furthermore, to do so would necessarily involve the recommended use of commercial geocoding tools since no tools are provided by the Federal government. We discuss the geocoding problem more fully in a companion report entitled "Methods to Improve Geocoding."[4] We suggest that an explanation of geocoding methods and tools be incorporated into the supplementary guidelines discussed in Section 2.6.

Problem 4 - No Method for Treating Problem Addresses: Invariably, depository institutions will make mortgage loans that are secured by residential real property located at addresses that are not contained in any of the available address coding guide directories or programs. Consequently, those responsible for the geocoding of addresses to census tracts do not have a valid base of information from which to accomplish geocoding. Since Regulation C does not discuss methods of geocoding, it provides no guidance for accommodating these problem addresses. The State of New York addressed this problem by permitting institutions to exclude up to 15 percent of the "problem" addresses from geocoding.[6] We do not recommend the adoption of this method because it results in an understatement of the actual volume of lending activity.

Solution: We suggest that Regulation C be revised to provide guidance for the geocoding of addresses that cannot be assigned to census tracts either because the areas are not tracted or because the addresses are not contained in available geocoding tools. We suggest the regulations state that these problem addresses be grouped by ZIP code and included on the disclosure statement in numerical order immediately after the census tract information.

2.2.2 Aggregation Problems and Solutions

Regulation C: Section 203.2 of Regulation C defines applicable terms such as federally related mortgage loans and residential mortgage loans, while Section 203. defines the loan classifications to be included in the disclosure report and the requirements for compiling the loan information. This latter section states that the mortgage loan data shall be itemized by the census tract. in a format *similar* to guideline Form HMDA-1, which is set forth in the appendix to this part." (Emphasis Added)

Problems and Solutions: We identified the following three problems associated with Regulation C related to aggregation:

1) inclusion of inappropriate loans in the disclosure statement
2) addendum item
3) compilation errors

Problem 1 - Inclusion of Inappropriate Loans: During our investigation of accuracy with which the disclosure statements are compiled, we found many instances where inappropriate loans were being included in the disclosure statements. The most prevalent errors were the inappropriate inclusion of business loans and certain types of construction and refinanced loans. Regulation C states that loans secured by a first lien on residential real property, including a first lien refinancing of an existing loan, should only be included in the disclosure statement if their purpose is to purchase, repair, rehabilitate,or remodel residential real property. It further states that temporary financing such as construction loans) and loans made primarily for business or other consumer purposes should not be included.

The inappropriateness of business loans is clear, but the conditions under which construction or refinanced loans should be included is not clear.

According to the regulation, construction loans for residential real property should be included, if they are not "temporary financing." Thus, long-term construction loans are appropriate for inclusion, but no definition is given to differentiate between temporary or long-term financing. Institutions use a variety of methods to finance construction by the owner. One prevalent method is to make a short-term construction loan followed by a separate mortgage loan. Another prevalent method is to make one long-term (e.g., 30 year) loan for both construction and occupancy by the owner. Here, the owner typically pays the interest on the loan during the construction period, and then, with no change in terms, the owner begins paying principal and interest upon occupancy. Initially, such loans are classified by the institution as construction loans, and in some cases, this classification is never changed on the master file. In our discussions with depository institutions, we found a general lack of understanding associated with the reporting of construction loans. We found cases where temporary construction loans were being inappropriately reported, and we also found other cases where long-term construction loans were not being reported. A major source of the confusion is the terminology in Regulation C, Section 203.2, Paragraph (h) which states "Residential mortgage loan means a loan...but shall not include (*i*) temporary financing (such as a construction loan)...." This is interpreted by many to exclude all construction loans; whereas, it is intended to exclude only those involving temporary financing.

Refinanced loans present a different set of problems for those preparing disclosure statements. First, one must read and understand both Paragraph 203.4 (a)(4)(A) and Paragraph 203.2 (h) in Regulation C to understand the applicable criteria for refinanced loans that are to be included in disclosure statements. The former paragraph indicates that where the depository institution and the borrower are the same on both the existing loan and the refinanced loan; then, the refinanced loan should not be included unless it involves an increase in the outstanding principal balance. The latter paragraph indicates that to be included such a loan must be made primarily to purchase, repair, rehabilitate, or remodel residential real property.

Regulation C does not indicate whether the full amount of a refinanced loan or only the increased amount of the principal balance should be included in the disclosure statement. According to an unofficial opinion rendered by the Board of Governors of the Federal Reserve System, it is intended that the full amount of a refinanced loan be included in the disclosure statement.[7] Most institutions now appear to include the full amount of a refinanced loan, but some include only the amount of the increased principal balance. It is difficult for most institutions to report only the increased amount because they do not record the increased amount of the new loan in their master files. Thus, the regulation should be revised to require disclosure of the full amount of a refinanced loan.

Once the criteria for appropriate loans and loan amounts are understood, two additional difficulties remain. The first is obtaining a correct statement of the purpose of the loan from the borrower. The second is coding the purpose on the master file used to generate the disclosure statement. A purpose code does not exist on the master files of many of the depository institutions; consequently, there is no convenient way to discriminate on the basis of the purpose for the refinancing.

The impact that refinanced loans and construction loans made by the owner can have on reporting is illustrated by our analysis of 34 state-chartered savings and loan associations in San Diego. Together these two types of loans accounted for 16.7 percent of the $871,122,000 in mortgage loans made in 1977 by these 34 institutions. These institutions refinanced loans in the amount of $106,544,000 and made loans for construction by owner in the amount of $39,667,000. These loans were included in the Fair Lending Reports prepared by the State of California. However, since the purpose of the refinancing was not provided in the punch cards submitted by the depository institutions to the state, there is no way to determine how many of the refinanced loans met the requisite purpose of Regulation C.

Solution: To counter the problem of including inappropriate loans in disclosure statements, we suggest the use of a check-off list by the individual compiling the disclosure data. The check-off list would pose several questions including the following:

Have business loans, consumer loans, and temporary construction loans been *excluded?* Yes ☐ No ☐

Have refinanced loans made primarily for business or consumer purposes (other than to purchase, repair, rehabilitate, or remodel residential real property) been *excluded?* Yes ☐ No ☐

We are confident that the use of such a check-off list would substantially reduce these types of errors, and we strongly suggest this check-off list be included in the supplementary guidelines. We considered the appropriateness of making the use of such a check-off list a requirement in Regulation C. The argument against such a requirement in Regulation C is based upon the premise that regulations should address "what" is to be done but not "how" it is to be done. For this reason, we suggest that the appropriateness of such a revision to Regulation C be considered in the context of the validity of the above premise.

We suggest that Regulation C be revised to define temporary financing and to clarify the conditions under which construction loans should and should not be included.

We also suggest that Regulation C be revised to indicate that the full amount of a refinanced loan should be included in the disclosure statement. This will avoid the added burden required to modify automated files to include information on the amount of the principal balance that represents an increase. In addition, we suggest that the criteria for including refinanced loans in disclosure statements be examined, and that consideration be given to including all refinanced loans secured by residential real property regardless of the stated purpose of the refinancing. This would eliminate the difficult problem of identifying and sorting refinanced loans on the basis of their purpose.

Problem 2 - Addendum Item: The addendum item is the last column of the disclosure statement. In this column, Non-occupant Loans (except on multi-family dwellings) are to be itemized. The loans itemized in this column are also supposed to be included in the other relevant columns. For example, conventional loans made for non-occupant dwellings are also supposed to be included under other Residential Mortgage Loans (Conventional).

There are two major problems with the addendum item. First, we found that many institutions did not include the non-occupant loans in the other relevant loan categories. Furthermore, one cannot readily determine by inspecting the disclosure statement whether or not the non-occupant loans were included in the other appropriate loan categories. The prevalence of these errors of omission combined with the inability to detect the errors creates a significant problem in the interpretation of information derived from the disclosure statements.

The second major problem is the inability to differentiate between non-occupant mortgage loans and home improvement loans. Even if one were certain that non-occupant loans were included in the other relevant columns, there is no way to determine the number and amount of non-occupant mortgage loans vis-a-vis non-occupant home improvement loans.

Solutions: We believe the supplementary guidelines and, in particular, the check-off list is the most appropriate solution to the problem of failure to include non-occupant loans in the other relevant columns. The check-off sheet should include the following:

Has each mortgage loan included in the non-occupant loan column (addendum item) been included *also* in the other appropriate column)? Yes ☐ No ☐

Combining the check-off sheet with an example in the supplementary guidelines would reduce these errors.

A differentiation of non-occupant mortgage loans from home improvement loans can be achieved in several ways:

1) Divide the addendum item into two columns

2) Include only mortgage loans in the non-occupant column and combine occupant and non-occupant home improvement loans into the same column

3) Include only mortgage loans in the non-occupant column and exclude non-occupant home improvement loans from the disclosure statement.

A determination of the preferred course of action is dependent upon how valuable the information provided by each of the above methods would be to those using disclosure statements as well as the added burden that would be imposed by each of these methods. We leave the value judgments to others, and confine our analysis to the technical and cost implications.

Dividing the addendum item can be achieved by either adding a new column and retaining the existing columns or by adding a new column and dropping the column for Total Residential Mortgage Loans. The width of the report is sufficient to accommodate an added column particularly if loan amounts are rounded to the nearest one thousand dollars In addition, the column for Total Residential Mortgage Loans could be dropped since this column is merely the sum of the previous columns As such its only value is the convenience of the summation and the cross-checking ability it provides. However, only a small percentage of institutions report both conventional and FHA, FmHA or VA loans, so the summation is infrequently applicable.

However, the impact of changing the format of the disclosure statement on the files needed to prepare the statement needs to be weighed carefully. Many depository institutions use automated means to prepare their disclosure statements. Any changes that are contemplated should be weighed against the added burden that would be placed upon depository institutions to modify their current reporting programs and files. The second and third methods described above would not require modifications to the current files and only minimal modifications to the selection criteria and table headers. Dividing the addendum item into two columns may require substantial changes in the reporting programs of institutions that generate the disclosure statement by automated means. Such changes would impact thousands of depository institutions new using automated means.

Problem 3 - Compilation Errors: Compilation errors are made during the preparation of the disclosure statements in three ways: 1) Selecting and including inappropriate loans in a given census tract line, 2) Assigning the loans for a given census tract to an inappropriate loan category (i.e., column), and, 4) Incorrectly summing the column totals. By far, the most significant compilation error found in the Accuracy phase of the study was census tract assignment errors caused by either incorrectly aggregating loans into a census tract line or incorrectly omitting loans from a census tract line. These errors occurred because of inadequacies in the institution's procedures for selecting loans from the file transferring these data to other files, and aggregating the data into the disclosure statement. This causes loans to be over disclosed or under disclosed in the census tract line. The study of Accuracy in the Buffalo SMSA found a total of 99 loans over-disclosed and 82 loans under-disclosed in the 210 census tracts in the sample.

Three of the ten sampled institutions in the San Diego SMSA made errors in more than 50 percent of the census tract lines in the samples. The two most significant problems were census tract assignment errors and the inappropriate inclusion of short-term construction loans A total of 217 loans were over disclosed and 81 loans were under disclosed in the 225 census tracts in the sample. A total of 43 inappropriate loans with a value in excess of $20 million were included in these census tracts. Many of these were short-term condominium construction loans in excess of $1 million each.

Eighteen of the 25 sampled institutions in the Chicago SMSA made errors in more than 50 percent of the census tract lines in the sample. Census tract assignment errors were the most significant problems. A total of 2,270 loans were over disclosed and 579 loans were under disclosed in the 435 census tracts in the sample. A complete discussion and analysis of these types of errors is presented in the companion report, "Accuracy of Disclosure Statement Preparation."[5]

Solution: The nature of the compilation errors and the extent to which these errors exist indicate that current compilation procedures need to be improved. Two complementary solutions are possible. First, depository institutions need to employ better compilation procedures to reduce the high error rate. Depository institutions can be aided in the employment of better compilation procedures by developing and incorporating suggested compilation procedures in the supplementary guidelines Secondly, the Agencies need to institute enforcement methods which will provide assurances that compilation errors are within acceptable limits. A discussion of enforcement procedures is presented in the companion report, "Enforcement of the Home Mortgage Disclosure Act."[8] The key element in enforcement methods requires a revision to Regulation C to require depository institutions to maintain a listing of the loans and census tracts that formed the basis for their disclosure report. This revision is discussed in the following paragraph.

2.2.3 Audit Trail Problem and Solution

During the audits we conducted in the Accuracy phase of our study, we learned a great deal about the difficulties in attempting to aggregate an entire disclosure statement or the information included in a sample of census tract lines. An individual loan loses its identity when it is aggregated with others in the same census tract line; however, in order to verify the validity and accuracy of the loan information in a census tract line, one must be able to identify the individual loans comprising the line. In most cases today, there is no convenient or accurate basis for reconstructing the information in the disclosure statement for a particular SMSA. Frequently, the depository institutions we visited during the accuracy audits indicated that it was difficult to identify the loans that composed a particular disclosure statement. Similarly, the Federal examiners, who obtained data on selected census tract lines for use in the study, met with considerable difficulty in their attempts to identify the relevant loans. The problems associated with attempting to find the loans relevant to a particular census tract line by consulting the master file were as follows:

- Census tract numbers are not included on all of the master files

- When census tracts were included on the master file, the master file was not listed in sequence by census tract. Consequently, loans from a particular census tract were distributed throughout the file
- Master files generally include loans for all years and not only for year of the disclosure statement
- Master files include loans for more than one SMSA
- Loans that were paid up or sold in a previous year may have been removed for the master file after the disclosure statement was prepared.

An accurate and convenient method for identifying tha loans comprising a disclosure statement for a particular SMSA is a prerequisite to the validation of its contents. The time and effort required to reconstruct and validate even a sample of the census tract lines is simply much too great without such a method. Unfortunately, such a method does not usually exist today.

Solution: We suggest that Regulation C be modified to require that a listing of the loans comprising the disclosure statement be available to Federal examiners. The listing of loans should be provided in numerical order by census tract (or by ZIP code where census tracts were not assigned). The listing of loans should include the loan number, census tract, type of loan, type of dwelling, property address and the loan amount.

The added burden to produce this loan listing is minimal. Institutions or service bureaus using automated means to produce the statement can simply produce the listing with the statement. Institutions using manual means to produce the statement can simply retain the work papers used in compiling the loans for each census tract in the statement. One convenient manual method we observed is the use of a loan register that contains a page for each census tract. As each new loan is made, the appropriate census tract is determined and the appropriate information needed for the disclosure statement is recorded on the page for the relevant census tract.

A listing of the loans comprising the disclosure statement would provide a convenient method for the personnel from the depository institution or for

Federal examiners to validate the contents of the statement by spot-checking a sample of the census tracts. The validation can be performed in several ways. The accuracy of geocoding can be tested on a sample of loans. The aggregation and classification of loans can be tested for a sample of census tracts. The completeness and validity of the loans in the listing and the disclosure statement can be tested by sampling between the loan listing and the master file.

2.3 PUBLIC NOTICE, AVAILABILITY, AND COPYING - PROBLEMS AND SOLUTIONS

During the course of the study, we identified several potential problems related to public notice, availability, and copying of disclosure data. These are termed "potential" problems, because there has been little request by the public for the disclosure statements. Consequently, there are no major problems associated with public notice, availability, and copying. However, if one adopts the premise that public disclosure remains a fundamental objective of the Act, then the problems and solutions discussed below are relevant. These problems are classified as follows:

- Public Notice
  - Inadequate public coverage
  - Insufficient wording in notice
- Availability of Disclosure Data
- Copying of Disclosure Statement
  - Ambiguity of requirements
- Certification of Completeness and Accuracy

2.3.1 Public Notice Problems and Solutions

Regulation C: Regulation C requires depository institutions to make "appropriate efforts" annually to notify their depositors of the availability of mortgage loan data. The following methods are suggested but not required by the regulation: 1) inserting a notice in depositor statements, 2) posting a notice in the lobby for at least one month, or 3) publishing a notice in a local newspaper of general circulation. By the use of the conjunction "or," the regulation implies that use of any one of the above methods will satisfy the requirement for public notice.

Problems and Solutions: We identified two problems related to public notice:

1) Inadequate public notification
2) Insufficient wording in notice

Problem 1 - Inadequate public notification: Although three techniques for public notification are suggested in Regulation C none of the three is actually required It is left rather to the judgment of each depository institution to determine what constitutes "appropriate efforts at notification. An analysis of the notification coverage provided by each of the suggested methods has led us to the conclusion that even the use of all three would not provide widespread and consistent notification of an institution's patrons.

Inserting a notice in depositors' statements adequately and appropriately notifies depositors, but does not reach borrowers or potential loan applicants.

Posting a notice in the lobby for one month has two shortcomings. First, being posted for only a month, it will inform only 8 percent of the walk-in population who are not regular patrons. The regular patrons, many of whom bank by mail, are more assuredly informed by a notice in their account statements. Second, because larger institutions frequently locate their savings department and loan department in different parts of the building, a notice posted in the main lobby will likely not be seen by a walk-in loan applicant. This was the case in one San Diego institution which our staff visited and which had a separate entrance for its second-floor loan department.

Publishing a notice in a local newspaper will reach the appropriate segment of the public only if the subscriber happens to focus his or her attention on the notice the day it is published. The likelihood of a newspaper notice capturing an individual's attention and motivating him to review a mortgage disclosure report is minimal.

Solution: JRB recommends that the regulations governing public notification be modified to ensure a broad coverage of each depository institution's patrons. The following approach will reach all of an institution's patrons at a minimal cost.

- All depositors and borrowers for institutions that send periodic account statements inserting a notice in a periodic account statement at least once a year
- Loan applicants communicating by telephone and mail - inserting a notice in loan application forms package
- Walk-in loan applicants posting a notice continuously in the public lobby of the mortgage loan department of the home and branch offices located in the SMSA.

Problem 2 - Insufficient wording in notice: Regulation C does not specify the wording to be used in a posted notice other than that it "notify. .depositors of the availability of. .mortgage loan data." JRB staff members telephoned and/or visited twelve institutions with the objective of copying the disclosure statement. In most cases our staff members were more successful in finding a posted notice than finding anyone who knew anything about the disclosure statement.

Solution: We suggest Regulation C be modified to specify the content of the disclosure statement availability notice posted in the home and branch offices of each depository institution. The notice should answer the three questions, "what," "where," and "who"; that is, "what" the report is, "where" (at which branch) it is available, and "who" at this branch is knowledgeable and responsible for answering public inquiries.

2.3.2 Availability Problem and Solution

Regulation C: Regulation C requires that the entire mortgage loan disclosure statement be available either (1) at a depository institution's home office or, if there is no general public access, (2) at a place convenient and accessible to the public within the SMSA, or (3) by mail with the imposition of a reasonable reproduction charge. The same requirements apply to accessibility of the statement from at least one branch office in each applicable SMSA, except that, at the option of the depository institutions, the report may omit census tract (or ZIP code) detail for all SMSAs other than the one in which the branch is located.

Problem - Availability of disclosure statement: By requiring the availability of disclosure statements at only one branch in each applicable SMSA, the current regulation potentially deprives the outlying public of reasonable access. In the San Diego SMSA, for example, there are branches of depository institutions as far as 80 miles from the center of the city.

Solution: To provide more convenient public access to the disclosure statement, JRB recommends that the requirement for disclosure statement availability at a single branch office within each SMSA be expanded to include, at a minimum, those branches required to make available a copy of the Community Reinvestment Act statement.

2.3.3 Copying Problem and Solution

Regulation C: Regulation C requires that each depository institution make its mortgage loan disclosure statement available "to anyone requesting it for inspection *or* copying." It further states that if the institution "makes reproduction facilities available, it may impose a reasonable charge for the cost of reproducing the data."

Problem - Ambiguity of requirements for copying: The Regulation C requirement for "inspection *or* copying" is in response to wording in the Act which specifies that the disclosure statement shall be made available for "inspection *and* copying." (Emphasis added) Both statements are ambiguous. First, it is not made clear whether "copying" refers to "taking notes" (that is, manual transcription) or whether it infers reproduction by a photocopier. Second, the translation of the "and" in the Act to an "or" in Regulation C becomes a victim to an ambiguity built into the English language; namely, that of the inclusive versus the exclusive "or." Does "inspection or copying" infer "inspection or copying or both" (prerogative of individual requesting it) or does it mean "inspection or copying but not both" (prerogative of the institution)? The confusion is abetted in Regulation C by the further statement that "if a depository institution makes reproduction facilities available, it may impose a reasonable charge for the cost of reproduction of the data."

To determine what the depository institutions' possible interpretations might be, JRB staff members contacted six S&L's in San Diego to request a copy of the disclosure statement (see Appendix B). Three of the six readily agreed to provide copies, while the other three adamantly refused to consider making copies. A JRB staff member visited a branch of each of the refusing institutions (a different branch in each case from the one telephoned). One of the three readily agreed to make copies. The other two did so only after being assured that the information was to be used for study purposes.

Solution: We suggest that Regulation C be revised to read "inspection and copying" and that "copying" be defined to be photocopying. Some institutions will not have photocopying equipment convenient for this purpose. These institutions would have to obtain a photocopy from an outside source. The institutions should continue to have the prerogative of passing the reasonable external or internal copying charges for this service on to the requestor.

2.3.4 Certification Problem and Solution

Problem - No Certification of Disclosure Statement: There is currently no requirement for a responsible member of a depository institution to certify the contents of the disclosure statement The absence of a certification requirement results in a failure to identify overtly the person responsible for the validity of the disclosure statement, and it lessens the likelihood of a careful review of its contents Conversely if the disclosure statement is certified, then the responsible person is clearly identified for users and Federal examiners, and the likelihood of a review of its validity is increased.

Solution: We suggest that Regulation C be revised to require that the individual responsible for preparation of the disclosure statement certify "to the best of his or her ability" that the disclosure statement is complete and accurate.

2.4 COMPILING OR COMPARING DISCLOSURE STATEMENTS - PROBLEMS AND SOLUTIONS

The manner in which disclosure statements are used or intended to be used by citizens, citizen groups, or public officials is the major determinant in establishing the requirement to standardize the contents and formats of disclosure statements. This issue needs to be addressed and answered when and if Regulation C is revised. The lack of standardization of the contents and formats of the current disclosure statements makes it extremely difficult to compare or compile the information from a number of disclosure statements for given SMSA. However whether this ability was will be intended is not clear We found that organizations in several SMSAs have attempted to gather and compile disclosure statements; whereas, the usage of individual statements by private citizens appears to have been minimal. Although the analysis of usage is outside the scope of this report, we base the following analysis and suggested revisions to Regulation C on the premise that disclosure statements should be prepared in a manner that will permit compilation or comparison with minimal difficulty. If this premise is found to be invalid, then the proposed suggestions, that derive from this premise, should not be adopted. We classify the three main standardization problems as follows:

- Format and contents
- Differences in fiscal year
- State exemptions

2.4.1 Standard Format and Contents

Regulation C: The regulation states that the mortgage loan information is to be itemized by census tract in the specified classifications and "... in a format similar to guideline Form HMDA 1..." which is included in the Appendix to the regulation. It further states that the mortgage loan information is to be aggregated "...for each fiscal year...." Finally, Regulation C states that State-chartered depository institutions can be granted an exemption by the Board of Governors of the Federal Reserve System (Board) if the Board determines the state laws and regulations"...contain (i) requirements substantially similar to those imposed under the Act and (ii) adequate provisions for enforcement."

Problem - Lack of Standard Formats and Contents: Most of the disclosure statements we examined from federally-chartered depository institutions were similar in format to the guideline Form HMDA - 1. Notwithstanding errors the contents of these statements were also similar to those specified in the regulation in terms of types of loans and methods of aggregation However, found the formats and contents of the statements produced by the state-chartered institutions in Illinois and New York to be substantially different from the guidelines Differences in column headings relative column positions, and contents make comparison and compilation difficult. The disclosure statements produced by the State of California for the state-chartered institutions were similar to the Regulation C guidelines in format but not content (e.g., construction loans are included).

Solution: We suggest that Regulation C be revised to *require* the preparation of disclosure statement in the standard format of the guideline and with the loan classifications and aggregations specified in the regulation. This requirement will not impose any additional burden on most federally-chartered institutions who are already following these guidelines. The burden on the institutions who now prepare non-standard statements is minimal. The impact of this requirement on state-chartered institutions in states that are granted exemptions is significant and the suggested approach to these states and state-chartered institutions is discussed later in this section.

Standard statement formats and contents are the only means by which citizens, citizens' groups or public officials can readily compile and meaningfully interpret the disclosure information for the depository institutions in an SMSA.

Problem - Differences in Fiscal Years: The Act and Regulation C provide that "each depository institution .shall compile .the number and total dollar amount of mortgage loans .during each fiscal year." This means that a depository institution whose fiscal year ends on March 31 would prepare its "fiscal year 1978" disclosure statement for the period April 1, 1977 to March 31, 1978 Conversely, a depository institution whose fiscal year coincides with the calendar year would prepare its "fiscal year 1978" disclosure statement for the period January 1978 to December 31, 1978. Thus, the disclosure statements for all depository institutions in an SMSA can cover nearly a two-year span for a given fiscal year This difference in the reporting periods makes it impossible to compare or to compile and interpret the resultant disclosure statements on the basis of their lending patterns for a common time period. For instance, in the example above the 1978 fiscal years" of the two institutions only consist of three months in common (i.e., January, February March) and span a period of 21 months. Compiling these two disclosure statements with others ending in July September, etc., makes little sense because the aggregation results span two years of lending, and make it difficult to account for variations due to demand, interest rate fluctuation and general demographic changes during this period. This problem could be overcome by standardizing the reporting year.

As of June 1978, approximately one fourth of the 4051 savings and loan associations had fiscal year closures other than December 31.[9] Of the 957 with closures other than December 31, some 360 had closures on June 30 and some 345 had closures on September 30. According to the Federal Deposit Insurance Corporation, all or nearly all of the banks under their jurisdiction have fiscal year closures on December 31.

Solution: We suggest that Regulation C and the Act be revised to *require* submission on a calendar year basis. This revision will greatly facilitate the interpretation and use of information compiled from the various disclosure statements prepared by institutions within an SMSA. This revision would add a small burden to those institutions with fiscal closures other than December 31, but the benefits derived from having a common basis for comparison and interpretation appear to outweigh the small added burden.

Problem - State Exemptions: The fundamental rationale behind the granting of exemptions to states with laws, regulations, and enforcement procedures that are "substantially similar" to the Act is certainly valid. Assuming the problem encountered in the State of Illinois can be avoided the granting of exemptions to states to eliminate dual or overlapping federal-state reporting is a sound objective. However, the problem lies in determining what is "substantially similar." The exemptions granted to the eight states thus far have resulted in reporting formats and contents that are *not* similar, and these dissimilarities make compilation onerous and interpretation impossible. The statements previously filed (no longer valid) by the state-chartered institutions in the State of Illinois illustrate this problem. The Disbursements Section of the statement combined both mortgage originations and purchases in itemizing loans for a given census tract The loan classifications were not similar to those in the guideline form in Regulation C For example the state report had columns for construction loans, but it did not have a provision for non-occupant loans. The state report was provided semi-annually rather than annually, thereby making compilation more difficult. The Fair Lending Report prepared by the State of California is similar to the Federal guideline form in format but not content. Conversely, the Mortgage Lending Disclosure Statement prepared by the New York State Banking Department is similar in content but not format. Its loan classifications are similar except that mortgage loans on multi-family dwellings are subdivided into conventional versus FHA, FmHA, or VA loans. However, originations and purchases are both itemized on the same page rather than on separate pages as is done with Federal guideline form. Further, New York State exempts banks with assets less than $50 million rather than $10 million as is the case with the Act.

Solution: We suggest that, in granting exemptions to states, the Agencies define "substantially similar" to include the preparation of disclosure statements with the standard formats and contents specified in Regulation C.

2.5 SUPPLEMENTARY GUIDELINES

In the preceding sections, we suggested revisions to Regulation C based on problems and issues identified during the three phases of our study. We reviewed disclosure statements and interviewed representatives from many depository institutions to gain an insight into the reporting problems, the types of errors most prevalent, and likely sources of these errors. We found, however, that many of the errors were occurring not because of deficiencies or ambiguities in Regulation C, but rather because of the complexity of its wording and a consequent confusion over definitions and procedures on the part of individuals compiling disclosure statements.

Regulations are intended to be definitive and unambiguous, but they are not intended to provide step-by-step instructions for compliance with the requirements they impose They must cover exceptions and special circumstances to the intended requirements. Regulations are written with the assumption that each element will be read and understood *if* it has been written in definitive terms. (Emphasis by paraphrasing and repetition is understandably avoided in regulations that are lengthy and complex.) Thus, while regulations might appear to be definitive, they do not, by themselves, provide an adequate basis for an operational procedure.

To improve understanding of and adherence to the regulations, we suggest the development of supplementary guidelines which would clarify the regulations, emphasize potential areas of misunderstanding, and provide step-by-step instructions for preparation of the disclosure statement. The guidelines would address the following topics directly related to the regulations:

- Definitions
- Who must comply
- Types of loans and data to be included
- Types of loans to be excluded
- Geocoding tools - types, availability, and tradeoffs
- Report format range of flexibility
- Range of flexibility in content and format of exempted state-chartered institutions

- Reporting period and due date
- Public notice
- Availability and copying

In addition to the above clarifications of the regulations, we recommend the following be included for further emphasis and illustration:

- Suggested step-by-step instructions
- Completed report with annotations
- Disclosure statement completion checklist

The step-by-step numbered instructions would "walk" the individual preparing a disclosure statement through the collection of data on worksheets, geocoding, and aggregating in columns of the disclosure statement. These instructions would be accompanied by annotated illustrations of completed statements.

We recommend a check-off list be included in the supplemental guidelines (See Figure 2.1) to provide an overt self-test of adherence to elements of the regulations that are most likely to be misunderstood. We believe the use of such a check-off list would go far in reducing the types of errors we found to be most prevalent in the institutions we investigated during the accuracy phase of our study.

CHECK LIST FOR PREPARATION OF DISCLOSURE STATEMENT

		YES	NO
1.	Have business loans, consumer loans, and temporary consturction loans been excluded?	☐	☐
2.	Have loans on unimproved land been excluded?	☐	☐
3.	Are all condominiums classified as single family dwellings even when five or more condominum units are involved?	☐	☐
4.	Does the multi-family dwelling column include both residential motgage loans and home improvement loans for both occupants and non-occupants?	☐	☐
5.	Does the addendum item exclude multi-family dwellings?	☐	☐
6.	Does the addendum item include both residential mortgage loans and home improvement loans on non-occupant property?	☐	☐
7.	Has each mortgage loan counted in the non-occupant loan column (addendum item) been counted also in at least one other column?	☐	☐
8.	Has the full amount of the new principal balance been included for refinanced loans where the depository institution and the borrower are the same on both the existing and the refinanced loan.	☐	☐

NOTE: If the answer to any of the above questions was "no," a pattern of error will exist in the Mortgage Loan Disclosure Statement.

Figure 2.1: Example Check-Off List

REFERENCES

1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data From Three Standard Metropolitan Statistical Areas -- Utility of the Home Mortgage Disclosure Act," November 1979.

2. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data From Three Standard Metropolitan Statistical Areas -- Utility of the Home Mortgage Disclosure Act," November 1979.

3. United States Department of Commerce, "News Release," December 6, 1977.

4. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data From Three Standard Metropolitan Statistical Areas -- Methods to Improve Geocoding," November 1979.

5. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data From Three Standard Metropolitan Statistical Areas -- Accuracy of Disclosure Statements Preparation," November 1979.

6. Superintendent of Banks, State of New York, "Supervisory Procedure G107," May 31, 1977.

7. Interpretation of HMDA obtained from a member of the Federal Reserve Board by a staff member of the Federal Home Loan Bank Board Office of Examinations and Supervision. Information transmitted in phone call to JRB, June 12, 1979.

8. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data From Three Standard Metropolitan Statistical Areas -- Enforcement of the Home Mortgage Disclosure Act," November 1979.

9. Federal Home Loan Bank Board, A table entitled "Number of Closers by Month by District as of June 1978."

REGULATION C

(12 CFR 203)

Effective June 28, 1976

HOME MORTGAGE DISCLOSURE

SECTION 203.1—AUTHORITY, SCOPE, AND ENFORCEMENT

(a) **Authority and scope.** This Part comprises the regulations issued by the Board of Governors of the Federal Reserve System pursuant to the Home Mortgage Disclosure Act of 1975 (Title III of Pub. L. 94–200; 89 Stat. 1125 *et seq.*). This Part applies to depository institutions which make federally related mortgage loans. Nothing in the Act or this Part is intended to, nor shall it be construed to, encourage unsound lending practices or the allocation of credit.

(b) **Administrative enforcement.** As set forth more fully in sections 305 and 306 of the Act, compliance with the provisions of the Act and this Part shall be enforced by the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the Board of Directors of the Federal Deposit Insurance Corporation, the Federal Home Loan Bank Board (acting directly or through the Federal Savings and Loan Insurance Corporation), and the Administrator of the National Credit Union Administration.

SECTION 203.2—DEFINITIONS

For the purposes of this Part, the following definitions apply unless the context indicates otherwise:

(a) Act means the Home Mortgage Disclosure Act of 1975 (Title III of Pub. L. 94–200; 89 Stat. 1125 *et seq.*).

(b) **Branch office** means any office approved as a branch of the depository institution by that depository institution's Federal or State supervisory agency.

(c) **Depository institution** means any commercial bank, savings bank, savings and loan association, building and loan association, homestead association (including cooperative banks), or credit union, which makes federally related mortgage loans. Any majority-owned subsidiary of a depository institution shall be deemed to be part of its parent depository institution for the purposes of this Part.

(d) **Federally related mortgage loan** means any loan (other than temporary financing such as a construction loan) which (i) is secured by a first lien on residential real property (including individual units of condominiums and cooperatives) that is designed principally for the occupancy of from one to four families and is located in a State; and (ii)(A) is made in whole or in part by a depository institution the deposits or accounts of which are insured by any agency of the Federal Government, or is made in whole or in part by a depository institution which is regulated by any agency of the Federal Government; or (B) is made in whole or in part, or insured, guaranteed, supplemented, or assisted in any way, by the Secretary of Housing and Urban Development or any other officer or agency of the Federal Government or under or in connection with a housing or urban development program administered by any other such officer or agency; or (iii) is intended to be sold by the depository institution that originates the loan to the Federal National Mortgage Association, the Government National Mortgage Association, the Federal Home Loan Mortgage Corporation, or a financial institution from which it is to be purchased by the Federal Home Loan Mortgage Corporation.

(e) **FHA, FmHA, or VA loans** means mortgage loans which are insured under Title II of the National Housing Act or under Title V of the Housing Act of 1949 or which are guaranteed under Chapter 37 of Title 38, United States Code.

(f) **Home improvement loan** means a loan, unsecured or secured by collateral other than a first lien on residential real property, (i) the proceeds of which are to be used for the purpose of repairing, rehabilitating, or remodeling an existing residential dwelling located in a State as stated by the borrower to the lender at the time of the loan transaction, and (ii) that is recorded on the books of the depository institution as a home improvement loan.

(g) **Mortgage loan** means a "residential mortgage loan" as defined in paragraph (h) of this section or a "home improvement loan" as defined in paragraph (f) of this section.

(h) **Residential mortgage loan** means a loan which is secured by a first lien on residential real property located in a State, including a first lien refinancing of an existing loan, but shall not include (i) temporary financing (such as a construction loan), or (ii) purchase of an interest in a pool of mortgage loans (such as mortgage participation certificates issued or guaranteed by the Federal Home Loan Mortgage Corporation, the Government National Mortgage Association, or the Farmers Home Administration), or (iii) a loan made primarily for business or consumer purposes (other than to purchase, repair, rehabilitate or remodel residential real property) but in connection with which a first lien on residential real property is taken as collateral.

(i) **Residential real property** means improved real property used or to be used for residential purposes, including single-family homes, dwellings for from two to four families, multi-family dwellings, and individual units of condominiums and cooperatives.

(j) **State** means any State of the United States of America, the District of Columbia, and the Commonwealth of Puerto Rico.

SECTION 203.3—EXEMPTIONS

(a) The following categories of depository institutions are exempt from the compilation of data and disclosure requirements of sections 203.4 and 203.5 of this Part:

(1) any depository institution that has total assets as of the last day of its last full fiscal year of $10,000,000 or less; or

(2) any depository institution that has neither a home office nor any branch office located in a standard metropolitan statistical area (SMSA) as currently defined by the Office of Management and Budget of the United States Government; or

(3) any State-chartered depository institution subject to the mortgage loan disclosure laws (statutes or regulations) of a State or subdivision thereof that the Board determines, in accordance with the procedures set forth in the Supplement to this Part, contain (i) requirements substantially similar to those imposed under the Act, and (ii) adequate provisions for enforcement.

(b) A depository institution that was exempt on or after the effective date of this Part on the basis of paragraph (a) of this section and that subsequently becomes no longer exempt shall compile the data described in section 203.4 of this Part for each fiscal year beginning with its last full fiscal year ending prior to the date it was no longer exempt, and that last full fiscal year shall be deemed to be a "full fiscal year ending prior to July 1, 1976" for the purposes of section 203.4 of this Part.

SECTION 203.4—COMPILATION OF MORTGAGE LOAN DATA

(a) **Data to be included.** (1) Each depository institution shall aggregate, separately for each standard metropolitan statistical area (SMSA) in which it has a home office or branch office, its mortgage loan data for each fiscal year beginning with its last full fiscal year ending prior to July 1, 1976, with the exception of mortgage loans described in subsection (4) of this paragraph. Mortgage loan data relating to residential real property located within the relevant SMSA (i.e., the SMSA where a home or branch office is located) shall be segregated from mortgage loan data relating to residential real property located outside the relevant SMSA and shall be itemized by the census tract in which the principal residential real property securing the residential mortgage loan (or, in the case of home improvement loans, the property to be improved) is located (except as provided in subsection (2) of this paragraph) according to the following classifications in a format similar to guideline Form HMDA-1, which is set forth in the appendix to this Part:

(i) FHA, FmHA, or VA loans, except on multi-family dwellings (i.e., dwellings for more than four families), subdivided as to those loans (A) originated and (B) purchased by the depository institution, during that fiscal year;

(ii) residential mortgage loans other than FHA, FmHA, or VA loans and other than loans on multi-family dwellings, subdivided as to those loans (A) originated and (B) purchased by the depository institution, during that fiscal year;

(iii) all residential mortgage loans, except on multi-family dwellings, (i.e., sum of classifications (i) and (ii)), subdivided as to those loans (A) originated and (B) purchased by the depository institution, during that fiscal year;

(iv) home improvement loans, except on multi-family dwellings, subdivided as to those loans (A) originated and (B) purchased by the depository institution, during that fiscal year;

(v) all mortgage loans (home improvement loans and residential mortgage loans) on multi-family dwellings, subdivided as to those loans (A) originated and (B) purchased by the depository institution, during that fiscal year; and

(vi) all mortgage loans (home improvement loans and residential mortgage loans), except on multi-family dwellings, made to any borrower who did not, at the time of the loan transaction, intend to reside as his principal dwelling in the property securing the residential mortgage loan (or, in the case of home improvement loans, the property to be improved), subdivided as to those loans (A) originated and (B) purchased by the depository institution, during that fiscal year.

Classifications (i) through (v) include loans to both occupants and non-occupants of the property. Mortgage loan data relating to residential real property located outside the relevant SMSA (or relevant SMSA's in the case of a depository institution with home or branch offices in more than one SMSA) shall also be itemized according to classifications (i) through (v) set forth above, but further itemization of that data by census tracts or United States Postal Service ZIP codes is not required.

(2) Mortgage loan data relating to residential real property located within the relevant SMSA may be itemized, according to the classifications specified in subsection (1) of this paragraph, by United States Postal Service ZIP codes for the area in which the principal residential real property securing the residential mortgage loan (or, in the case of home improvement loans, the property to be improved) is located, in lieu of census tracts, to the extent that such data relate to:

(i) a full fiscal year ending prior to July 1, 1976; or

(ii) a part of a fiscal year if that part ends on June 30, 1976, provided that a mortgage loan disclosure statement for that part of the fiscal year is made available by the depository institution by September 30, 1976, and a separate mortgage loan disclosure statement for the remaining part of that fiscal year (itemizing mortgage loan data relating to residential real property within the relevant SMSA by census tracts) is made available by the depository institution within ninety days of the end of that fiscal year; or

(iii) residential real property located in an area of a currently defined relevant SMSA that is not tracted on the maps (as a portion of then-defined SMSA's or otherwise) in the series "1970 Census of Population and Housing: CENSUS TRACTS, Final Reports, PHC(1) Series" prepared by the Bureau of the Census of the United States Department of Commerce.

(3) Mortgage loan data to be compiled as described in this paragraph shall be in terms of number of loans and total dollar amounts (original principal amounts of loans originated by the institution to the extent of its interest, where the loan is made jointly or cooperatively, and unpaid principal balances of loans purchased by the depository institution, to the extent of its interest in such purchased loans), except that, in the case of purchased home improvement loans, the amount to be reported may include the unpaid finance charges. The compilations shall be on an annual basis and relate to mortgage loans originated or purchased solely during the relevant fiscal year.

(4) (i) A depository institution shall not include in its mortgage loan data to be compiled pursuant to paragraph (a) of this section:

(A) a refinancing that it originates involving no increase in the outstanding balance of the principal due on the existing loan where the depository institution and the borrower are the same parties to the existing loan and the refinancing; and

(B) a loan originated or purchased by the depository institution acting as trustee or in some other fiduciary capacity.

(ii) For the purpose of compiling mortgage loan data pursuant to paragraph (a) of this section with respect to a full fiscal year ending prior to July 1, 1976, a depository institution may - -

(A) notwithstanding the definition contained in section 203.2(f) of this Part, itemize as home improvement loans those loans that it has classified as home improvement loans for the purposes of State law, provided that no loans secured by first liens on residential real property shall be included as home improvement loans in the mortgage loan disclosure statement and reference is made in the disclosure statement to the State law definition of home improvement loan that is being utilized; or

(B) omit, at its option, any mortgage loan that was (1) both originated and either sold or paid in full during such fiscal year, or (2) both purchased and either sold or paid in full during such fiscal year, provided that the depository institution consistently applies this option with respect to all loans in those categories and clearly states in its mortgage loan disclosure statement for that year that such data have been omitted.

(b) **Applicable SMSA's, census tracts and ZIP codes.** (1) For the purpose of determining whether a mortgage loan is to be included in the classifications relating to residential real property within the relevant SMSA as described in paragraph (a) of this section (but not for the purpose of determining exemptions pursuant to section 203.3(a)(2) of this Part), the applicable areas of the relevant SMSA shall be those as defined by the Office of Management and Budget of the United States Government and in effect on June 28, 1976, or the first day of the fiscal year to which the mortgage loan disclosure statement relates, whichever is the later date.

(2) Applicable census tract numbers and boundaries shall be those appearing on the census tract maps in the series "1970 Census of Population and Housing: CENSUS TRACTS, Final Reports, PHC(1) Series" prepared by the Bureau of the Census, United States Department of Commerce. If the number itself would be duplicated in the mortgage loan disclosure statement for the relevant SMSA, the county, city, or town that uniquely identifies the census tract shall be identified in that disclosure statement.

(3) An applicable ZIP code shall be that for the area in which the principal residential real property securing the residential mortgage loan (or, in the case of home improvement loans, the property to be improved) is located. No depository institution is obligated to revise its mortgage loan data to reflect official changes of ZIP code numbers or boundaries made after the ZIP code for a particular loan is recorded.

(4) Nothing contained in this paragraph is intended to prohibit the use of maps, directories, computer programs, or the like that have more recent definitions of the applicable SMSA areas than those specified in subsection (1) of this paragraph, provided that every mortgage loan relating to residential real property within the applicable areas of the relevant SMSA as specified in subsection (1) of this paragraph or within the areas of the relevant SMSA as more recently defined shall be included in the data to be itemized by census tracts or ZIP codes as required by paragraph (a) of this section. If such updated revisions are utilized, the mortgage loan disclosure statement shall indicate the source of the revision.

(c) **Applicable presumption.** For the purpose of compiling mortgage loan data described in paragraph (a) of this section, a depository institution may presume (unless its records relating to that loan contain information to the contrary) with respect to any mortgage loan originated prior to June 28, 1976, or purchased at any time, that the borrower intended, at the time of the loan transaction, to reside as his principal dwelling in the property securing the residential mortgage loan (or, in the case of home improvement loans, the property to be improved), if such property is a residential dwelling used or to be used by from one to four families.

SECTION 203.5—DISCLOSURE REQUIREMENTS

(a) **Dates disclosure statements due.** (1) Each depository institution shall make available to the public by the following dates mortgage loan disclosure statements required to be compiled pursuant to section 203.4 of this Part:

(i) September 30, 1976, in the case of a disclosure statement relating to a full fiscal year ending prior to July 1, 1976, except as provided in subsection (2) of this paragraph;

(ii) within ninety days of the end of the relevant fiscal year in the case of a disclosure statement that relates to a full fiscal year ending subsequent to June 30, 1976; and

(iii) within ninety days of the date a depository institution becomes no longer exempt in the case of the initial disclosure statement required pursuant to section 203.3(b) of this Part.

(2) If an application for an exemption is filed by September 30, 1976, pursuant to section 203.3(a)(3) of this Part, a State-chartered depository institution subject to the mortgage disclosure laws of a State or subdivision thereof being considered in the application shall not be required to compile and make available to the public a mortgage loan disclosure statement relating to a full fiscal year ending prior to July 1, 1976, while the application is pending before the Board. If the State-chartered depository institution is not granted an exemption by the Board's determination on the application, that depository institution shall make the disclosure statement for that fiscal year available within sixty days of the date of the Board's determination.

(3) Any mortgage loan disclosure statement required to be made available shall be maintained and made available for a period of five years after the close of the first fiscal year during which that disclosure statement is required to be maintained and made available.

(b) **Offices at which disclosure statements to be made available.** (1) Except as provided in subsection (2) of this paragraph, each depository institution shall make available to the public disclosure statements required to be compiled pursuant to section 203.4 of this Part, by the dates specified in paragraph (a) of this section, at its home or branch offices, as follows:

(i) in the case of depository institutions that have home or branch offices in only one SMSA, the entire mortgage loan disclosure statement shall be made available at the home office and at least at one branch office (if there is such a branch office) within that SMSA; and

(ii) in the case of depository institutions that have home and branch offices in more than one SMSA, (A) the entire mortgage loan disclosure statement (relating to all SMSA's with respect to which the depository institution is required to compile mortgage loan data) shall be made available at the home office and (B) the entire mortgage loan disclosure statement shall also be made available at least at one branch office within every SMSA where the depository institution has branch offices (including the SMSA where the home office

is located), except that the d
a particular branch office ne
tract or ZIP code itemization
vant SMSA's other than the
particular branch office is l
aggregated data from the
with respect to each of
SMSA's (i.e., the column to
the appendix to this Part) ar

(2) Any depository insti
offices (home and branch) ar
is no general public access
mortgage loan disclosure stat
compiled pursuant to sectio
by the dates specified in p
section, in either of the follo

(i) it shall designate a
accessible to the public wit
home office where the entir
closure statement (relating
respect to which it is require
loan data) will be available
and shall designate a conve
place within every other S
branch office, at which desi
be made available the entir
closure statement except for
option of the depository insti
or ZIP code itemizations wi
SMSA's other than the SM
ular branch is located prov
data from the disclosure stat
each of those other releva
column totals of Section I of
Part) are furnished; or

(ii) it shall promptly fu
one requesting the informat
quired mortgage loan disclos
ing no more than a reasonab
of reproduction of the data.

(3) A depository institut
propriate efforts at least onc
its depositors of the availab
loan data, such as by (i) in
periodic account statement
tion to depositors, (ii) post
lobbies of its home and bra
SMSA's for at least one mon
a notice in a newspaper or n
circulation in the SMSA's in
branch offices are located.

(4) Upon request, any office of a depository institution shall promptly provide information regarding the location of any office or designated place of that depository institution at which mortgage loan disclosure statements are available.

(c) *Manner of making disclosure statements available.* Each office or designated place of a depository institution that is required pursuant to paragraph (b) of this section to make a mortgage loan disclosure statement available shall make such a mortgage loan disclosure statement available to anyone requesting it for inspection or copying during the hours in which such office or designated place is normally open to the public for business. If a depository institution makes reproduction facilities available, it may impose a reasonable charge for the cost of reproduction of the data.

SECTION 203.6—SANCTIONS FOR VIOLATIONS

(a) A violation of the Act or this Part is subject to sanctions as provided in section 305 of the Act.

(b) An error in compiling or disclosing required mortgage loan data shall not be deemed to be a violation of the Act or this Part if the error was unintentional and resulted from a *bona fide* mistake notwithstanding the maintenance of procedures reasonably adopted to avoid any such error.

SECTION 203.7—EFFECTIVE DATE

This Part shall be effective on June 28, 1976.

Page 1 of 2
FORM HMDA-1
(Pursuant to Public Law 94-200)

MORTGAGE LOAN DISCLOSURE STATEMENT
(Specimen Form)

Name of Depository Institution ____________________

Relevant SMSA ____________________

Reporting Period ____________

Federal Enforcement Agency for this Institution

Name ____________________

Address ____________________

PART A ORIGINATIONS

Section I Mortgage loan data relating to residential real property located within the relevant SMSA

	Loans to both Occupants and Non-occupants of the Property										Addendum Item	
CENSUS TRACT or ZIP CODE (in numerical sequence)	FHA, FmHA or VA LOANS (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS ("Conventional") (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTGAGE LOANS (except on multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)	
	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount
Column Totals												

Section II Mortgage loan data relating to residential real property located outside the relevant SMSA (or SMSA's)

(See Instructions on p. 10)

FORM HMDA-1

MORTGAGE LOAN DISCLOSURE STATEMENT (cont.)

(Specimen Form)

PART B PURCHASED LOANS

Section I Mortgage loan data relating to residential real property located within the relevant SMSA

	Loans to both Occupants and Non-occupants of the Property										Addendum Item	
CENSUS TRACT or ZIP CODE (in numerical sequence)	FHA, FmHA or VA LOANS (except on multi-family dwellings)		OTHER RESIDENTIAL MORTGAGE LOANS ("Conventional") (except on multi-family dwellings)		TOTAL RESIDENTIAL MORTGAGE LOANS (except on multi-family dwellings)		TOTAL HOME IMPROVEMENT LOANS (except on multi-family dwellings)		TOTAL MORTGAGE LOANS ON MULTI-FAMILY DWELLINGS		NON-OCCUPANT LOANS (except on multi-family dwellings)	
	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount	No. of Loans	Principal Amount
Column Totals												

Section II Mortgage loan data relating to residential real property located outside the relevant SMSA (or SMSA's)

Instructions:

1. Data may be rounded to nearest thousands of dollars.
2. If more than one SMSA is involved, the relevant SMSA should be indicated next to the tract number or, preferably, separate pages should be used.
3. If the tract number is duplicated within a SMSA, the county, city or town that uniquely identifies the number should be stated next to the number.
4. Whenever a ZIP code number is permitted to be used, it should be preceded by the letter "Z".
5. If the statement is prepared on the basis of the definition of the relevant SMSA that is more recent than that in effect on the first day of the reporting period, so indicate.
6. Census tract numbers are those appearing on the maps in the Bureau of the Census 1970 PHC(1) series, but computer coding is permissible if explained on the statement.
7. "Multi-family dwellings" means residential dwellings for more than four families.
8. The column "Total Residential Mortgage Loans" should equal the sum of the preceding two columns (except for rounding).
9. This statement must be retained and made available for a period of five years from the last day of the reporting period.
10. If census tract itemization is required, the relevant tract maps should be conveniently made available with the statement.

SUPPLEMENT TO PART 203

PROCEDURES FOR AN APPLICATION FOR EXEMPTION PURSUANT TO PARAGRAPH (a)(3) OF SECTION 203.3

(a) **Application.** Any State or subdivision thereof,[1] State-chartered depository institution, or association of State-chartered depository institutions, may make application to the Board pursuant to the terms of this Supplement and the Board's Rules of Procedure (12 CFR 262) for a determination that, under the laws of that State or municipality,[2] a State-chartered depository institution is subject to requirements substantially similar to those imposed by Regulation C (12 CFR 203) and that there is adequate provision for enforcement of such requirements.

(b) **Supporting documents.** The application, which may be made by letter, shall be accompanied by (1) a copy of the full text of the laws of the State or municipality which are claimed by the applicant to impose requirements substantially similar to those imposed by this Regulation; (2) a statement of reasons to support the claim that applicable requirements of the laws of the State or municipality are substantially similar to all requirements imposed under this Regulation including an explanation of reasons as to why any differences are not significant; (3) a copy of the full text of the laws of the State or subdivision thereof which provide for enforcement of the State laws referred to in item (1) of this paragraph; and (4) an undertaking to inform the Board within 30 days of the occurrence of any change in the applicable law or regulations of the State or municipality.

(c) **Public notice of filing.** In connection with any application which has been filed in accordance with the requirements of paragraphs (a) and (b), notice of such filing will be published by the Board in the *Federal Register*, and a copy of such application will be made available for examination by interested persons during business hours at the Board and at the Federal Reserve Bank of each Federal Reserve District in which the applicant is situated. A period of time will be allowed from the date of such publication for the Board to receive written comments from interested persons with respect to that application. Should multiple applications be received with respect to the laws of the same State or municipality, the Board may, in its discretion, (1) consolidate the notice of receipt of all such applications in one *Federal Register* notice, and (2) dispense with publication of the notice of applications received after publication of the notice of an application relating to the laws of the same State or municipality.

(d) **Exemption from requirements.** If the Board determines on the basis of the information before it that under the laws of a State or municipality some or all State-chartered depository institution(s) are subject to requirements substantially similar to those imposed by this Regulation, and that there is adequate provision for enforcement of such requirements, the Board will exempt those State-chartered depository institutions in that State or municipality that are subject to such requirements from the requirements of the Act and the Board's regulations in the following manner: (1) Notice of the exemption will be published in the *Federal Register* and the Board will furnish a copy of such notice to the applicant, to each State or municipal authority responsibie for administrative enforcement of the laws of the State or municipality, to the regulatory authorities specified in section 305(b) of the Act, and to each interested person who has participated in the proceeding. (2) The Board will inform the appropriate official of any State or municipality in which State-chartered depository institutions that have received an exemption are located of any subsequent amendments of the Act (including the implementing provisions of this Part and published interpretations of the Board) which might call for amendment of the law, regulations or official interpretations of the State or municipality.

(e) **Revocation of exemption.** (1) The Board reserves the right to revoke any exemption if it at any time determines that the laws of a State or municipality do not in fact impose requirements which are substantially similar to those imposed by this Regulation or that there is not in fact adequate provision for enforcement. (2) Notice of the Board's intention to revoke any exemption previously granted shall be published in the *Federal Register* and shall be transmitted to the appropriate official of the State or municipality.

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[1] Hereinafter referred to as a municipality.

[2] Any reference to the laws of a State or municipality in this Supplement includes a reference to any regulations which implement such laws and official interpretations thereof, and to regulations of a State or municipal agency or department having jurisdiction over a class or classes of depository institutions.

A period of time will be allowed from the date of publication for the Board to receive written comments from interested persons with respect to the proposed revocation. (3) In the event of revocation of such exemption, notice of such revocation shall be published by the Board in the *Federal Register* and a copy of such notice shall also be furnished to the appropriate official of the State or municipality and to regulatory authorities specified in section 305(b) of the Act.

STATUTORY APPENDIX

Title III of Pub. Law 94–200 (approved Dec. 31, 1975); 89 Stat. 1125 *et seq.* 12 U.S.C. 2801–2809.

TITLE III—HOME MORTGAGE DISCLOSURE

Sec.
301. Short Title.
302. Findings and Purposes.
303. Definitions.
304. Maintenance of Records and Public Disclosure.
305. Enforcement.
306. Relation to State Laws.
307. Research and Improved Methods.
308. Study.
309. Effective Date.
310. Termination of Authority.

§ 301. Short Title

This title may be cited as the "Home Mortgage Disclosure Act of 1975."

§ 302. Findings and Purposes

(a) The Congress finds that some depository institutions have sometimes contributed to the decline of certain geographic areas by their failure pursuant to their chartering responsibilities to provide adequate home financing to qualified applicants on reasonable terms and conditions.

(b) The purpose of this title is to provide the citizens and public officials of the United States with sufficient information to enable them to determine whether depository institutions are filling their obligations to serve the housing needs of the communities and neighborhoods in which they are located and to assist public officials in their determination of the distribution of public sector investments in a manner designed to improve the private investment environment.

(c) Nothing in this title is intended to, nor shall it be construed to, encourage unsound lending practices or the allocation of credit.

§ 303. Definitions

For purposes of this title—

(1) the term "mortgage loan" means a loan which is secured by residential real property or a home improvement loan;

(2) the term "depository institution" means any commercial bank, savings bank, savings and loan association, building and loan association, or homestead association (including cooperative banks) or credit union which makes federally related mortgage loans as determined by the Board;

(3) the term "Board" means the Board of Governors of the Federal Reserve System; and

(4) the term "Secretary" means the Secretary of Housing and Urban Development.

§ 304. Maintenance of Records and Public Disclosure

(a)(1) Each depository institution which has a home office or branch office located within a standard metropolitan statistical area, as defined by the Office of Management and Budget shall compile and make available, in accordance with regulations of the Board, to the public for inspection and copying at the home office, and at at least one branch office within each standard metropolitan statistical area in which the depository institution has an office the number and total dollar amount of mortgage loans which were (A) originated, or (B) purchased by that institution during each fiscal year (beginning with the last full fiscal

APPENDIX B

DIFFICULTIES EXPERIENCED IN OBTAINING COPIES OF THE CALIFORNIA FAIR LENDING REPORT

INTRODUCTION

The following is an account of the events associated with the efforts of a JRB staff member to obtain the California Fair Lending Reports from six institutions located in the San Diego SMSA. These reports were needed for the study; however, the initial inquiries were made on the basis of an interested citizen. When difficulties arose, the nature of the study was revealed; and, ultimately, reports were obtained from all six institutions.

DIFFICULTIES EXPERIENCED IN OBTAINING COPIES OF CALIFORNIA FAIR LENDING REPORT (FLR)

Institution #1

I phoned the loan department at one of the branches and asked a loan officer about the report. She referred me to the department manager who went and found it. He said he'd send me a copy, but first would have to call a VP in Los Angeles. He called me back later and said the VP said they couldn't make copies. I then called the VP and explained the nature of the study whereupon he agreed to send me a copy, declaring that the cost of copying was the reason for discouraging provision of copies.

Institutions #2

I phoned the loan department at the downtown branch and talked to the loan officer. After asking around, she told me I could look at the report at any branch but that they wouldn't provide copies. I walked into one branch office and asked lobby official (I think she opened savings accounts) to see their Fair Lending Report (hereafter abbreviated "FLR") She knew exactly what I was requesting and walked me over to the loan desk where a notice declaring the availability of "fair lending information" was prominently displayed The reports for CY 77, 76 and 75 were in a silk-screened looseleaf on a bookcase behind the desk. After browsing and taking a few notes, I asked her if she'd Xerox the San Diego data which she did without inquiring why I wanted it. I was the first person to have requested the report.

Institution #3

I phoned one of their branch offices. The person answering the phone said they didn't make loans at that branch and I should call their loan agent at another institution. The second institution hadn't heard of the report and referred me back to the first institution's main office in another town in the SMSA. I talked with an individual in "loan production" at the main office who had to check with someone else in the office to determine what the FLR consisted of. She said a copy was available for inspection at a third branch (in San Diego SMSA) and sent me a copy without questioning its use. I phoned the third branch and asked the person answering the phone if they had a copy. They did.

Institution #4

I phoned the loan department at one of their branches and talked with a loan officer. She knew of the FLR and referred me to the department manager. After I disclosed the nature of the study, he said he would send me a copy, but forgot. Four days late, I drove to the branch and picked it up.

Institution #5

I phoned their downtown branch and spoke with a loan officer, who was aware of the FLR. She said a copy was available at any branch to "look at and take notes" but if I wanted a copy I should contact the FHLBB. I told her we were doing a study for the FHLBB. Still "no."

I walked into another branch and went to the loan department which was on the second floor. I asked the receptionist if they had a copy of the FLR. She referred me to loan officer #1 who gave me a "fair lending notice" which is an application to the State in cases of suspected discrimination. I described the FLR whereupon she referred me to loan officer #2. He gave me a fair lending pamphlet. After I described the FLR, he escorted me to the loan department manager's office. When I described the FLR, he said it sounded like something I'd have to get from their La Jolla office, then he asked whether I perhaps had mistakenly come to XYZ S&L insted of ZYX S&L. I reassured him that I was in the correct S&L and told him that the report was required to be available in at least one of their San Diego branches. He then referred me to the branch manager in the main lobby on the first floor.

Whew! He knew what I was asking for and led me to a sitting area where there was a large placard entitled "California Fair Lending Report of Home Mortgage Loan Data." Beside it, on the same table, was a full-size computer listing with the 1976 report. I told him I needed the 1977 data. He said he didn't think it had been compiled yet. I told him it should have been available in mid-1978. I looked around and found an unmarked black looseleaf binder on another table. Pay dirt! He said I was the first person to request it in 8 months I took a few notes then asked if I could have a few pages copied. He said they were required to display the report but were not permitted to copy it. I told him that there was no regulation prohibiting their copying the report--that it was at the option of the lending institution. I then disclosed the nature of the study and asked him if he was aware that their loan department was completely ignorant of the report's existence. He asked me for a business card, said he'd make a few phone calls and see what he could do. Twenty minutes later he said that if I could document the existence of the contract he would copy the pages. I drove back to the office, picked up the contract face sheet, and returned to the S&L. This satisfied him and he copied the report for me.

Institution #6

I phoned the loan manager in a branch office. She was familiar with the FLR, said I could see the report at any branch but that they wouldn't make copies. After I disclosed the nature of the study she suggested I obtain a copy through the FHLBB.

I walked into a second branch office. Two S&L persons at the desk in the lobby asked if they could help me. I asked if they had a copy of their FLR at this branch. They asked whom I represented and why I wanted to see it and what it was that I was talking about. I described the report. They referred me to their loan department manager. He asked whom I represented then pulled out a pile of bound reports let me find the one I wanted and asked me to sign a log. He said that although they posted the required notice and kept these reports, I was the first person ever to have required them.

When I remarked that I hadn't noticed the notice, he walked me back to the lobby to discover the placard lying face down on a table. After disclosing the nature of the study, I asked him if copies could be made. He pulled out their policy manual to check. It stated the usual requirements but said nothing either way about copies. He then said O.K., if I could prove the existence of the contract, which, of course, I did. After making the copies and giving them to me, he had second thoughts and said he'd better check with someone in their main office. This person said absolutely no, contract or no contract. The manager apologized and said he'd have to have the copies back. I said it was silly because I could and was prepared to sit in their lobby and hand copy the report. He said he had to have the copies back. I then said, "Oh well. Five out of six isn't bad." He said, "You got copies from everyone else? We don't want to be the only hold out. We have nothing to hide." I showed him the hard earned S&L report from another institution. He called the main office again. I got to keep the copies.

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

Enforcement of the Home Mortgage Disclosure Act

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JRB Project 2-800-118

TABLE OF CONTENTS

Page

FOREWORD i

SUMMARY iii

1. INTRODUCTION 1-1
   1.1 Purpose 1-1
   1.2 Scope 1-1
   1.3 Methodology and Limitations 1-2
   1.4 Regulatory Requirements 1-4
      1.4.1 Exemptions 1-4
      1.4.2 Compilation and Disclosure Requirements 1-5
      1.4.3 Sanctions for Violations 1-6
   1.5 Contents of This Report 1-7

2. ENFORCEMENT METHODS OF THE FEDERAL DEPOSIT INSURANCE CORPORATION 2-1
   2.1 Types of Examinations 2-1
   2.2 Examination Schedule 2-2
   2.3 Examiner Training 2-3
   2.4 Examination Procedures 2-5
      2.4.1 Forms and Instructions 2-5
      2.4.2 Practice in the Field 2-8
   2.5 Procedures for Noncompliance 2-10

3. ENFORCEMENT METHODS OF THE FEDERAL HOME LOAN BANK BOARD 3-1
   3.1 Type of Examination 3-1
   3.2 Examination Schedule 3-1
   3.3 Examination Training 3-2
   3.4 Examination Procedures 3-3
      3.4.1 Procedures and Instructions 3-3
      3.4.2 Practice in the Field 3-4
   3.5 Procedures for Noncompliance 3-5

4. ASSESSMENT AND IMPROVEMENT OF ENFORCEMENT METHODS 4-1
   4.1 Accuracy Problems with Mortgage Disclosure Data 4-1

TABLE OF CONTENTS (Cont'd)

Page

4.1.1 Accuracy Findings 4-1

4.1.2 Completeness Findings 4-5

4.2 Methods for Improving Compliance 4-9

4.3 Suggestions for Improvements in Regulation C and Enforcement 4-10

4.3.1 Supplementary Guidelines 4-11

4.3.2 Revisions to Regulation C 4-12

4.3.3 Examination Procedures to Assess the Accuracy of Home Mortgage Disclosure Act Data 4-16

4.4 Conclusion 4-18

Reference R-1

Appendix A A-1

LIST OF TABLES AND FIGURES

Page

Table 1.1: HMDA Examination Questions and Instructions 2-7

Table 4.1: Geocoding Accuracy For All Institutions in Buffalo, Chicago, and San Diego 4-3

Table 4.2: Percentage of Aggregation Errors by Institutions in Three SMSAs 4-4

Table 4.3: Summary of Suggested Revisions to Regulation C 4-14

Figure 4.1: Example Check List 4-13

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC) under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of report addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

• Phase 1	Develop Computer Systems, and Collect and Process Disclosure Statements
• Phase 2	Accuracy
• Phase 3	Completeness
• Phase 4	Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

Accuracy Problems with Home Mortgage Disclosure Data: In the accuracy phase of the study an assessment was made of the two major processes involved in the preparation of a disclosure statement geocoding and aggregation. Geocoding is the process of assigning a census tract to the address of residential property for which a loan was originated. Aggregation is the process by which data on applicable mortgage and home improvement loans are collected, recorded, selected, processed, and reported on disclosure statements.

The study findings on accuracy are based upon a detailed analysis of a sample of 44 depository institutions in the San Diego, Chicago, and Buffalo SMSAs. These findings indicate.that the geocoding error rates incurred by depository institutions in the San Diego and Buffalo SMSAs were within reasonable bounds but the geocoding error rates incurred by 35 percent of the depository institutions in the Chicago SMSA were greater than 20 percent which is considered an unacceptably high error rate. In addition, the aggregation error rates incurred by 50 percent of the sampled depository institutions the Buffalo and San Diego SMSAs and 80 percent of the sampled depository institutions the Chicago SMSA were greater than 20 percent also considered an unacceptably high error rate. The conclusion was reached that enforcement steps need to be taken to identify institutions with unacceptably low levels of geocoding and aggregation accuracy and to raise their accuracy to acceptable levels.

During the Completeness Analysis phase of the study, an investigation was made of the criteria used to include loans in disclosure statements prepared by institutions under the auspices of both Regulation C and state regulations. The Regulation criteria for inclusion of assumed, refinanced, and construction loans were found to be ambiguous and many depository institutions were not reporting these loans in accordance with the intent of Regulation C. Disclosure statements prepared under the auspices of state regulations vary in their treatment of these loans. Conclusions were reached that revisions to Regulation C were needed to clarify the criteria under which these loans should be included in disclosure statements and that in granting exemptions to states, the criteria specified in Regulation C be required.

Methods to Improve Enforcement: Enforcement of the Home Mortgage Disclosure Act and Regulation C can be improved by three methods. These are:

- Providing depository institutions with supplementary guidelines to clarify Regulation C and to provide procedures for the preparation of disclosure statements
- Revisions to Regulation C
- Implementing Examination Procedures to Assess the Accuracy of home mortgage disclosure data.

The need for supplementary guidelines derives from the study finding that Regulation C is not by itself an adequat operational procedure for preparing disclosure statements. Providing depository institutions with supplementary guidelines would improve the accuracy of mortgage disclosure data, the efficiency with which disclosure statements are prepared, and reduce the effort needed in compliance examinations to identify and correct accuracy problems.

Several revisions to Regulation C are needed to improve both the quality of home mortgage disclosure data and enforcement of the Act and Regulation C. The major revisions are:

- Requiring depository institutions to maintain a listing of the loans in the disclosure statement
- Requiring depository institutions to prepare disclosure statements in a standard format
- Requiring the format and content of disclosure statements prepared under state exemptions be in strict compliance with Regulation C criteria.

Revising Regulation C to make maintenance of a loan listing a mandatory requirement is an essential prerequisite to an assessment of the contents and accuracy of disclosure data during compliance examinations. The current absence of such a listing at most institutions is a significant factor contributing to inaccuracies in disclosure statements and is major obstacle to an assessment of the contents of the disclosure statement during compliance examinations.

Standardizing the format and contents of both Federal and state disclosure statements would eliminate the existing problem in which dissimilarities among disclosure statements make compilation difficult and interpretation impossible. Standardized formats and contents would, in turn, reduce the effort required in compliance examinations by eliminating the need to assess the contents of many different types of disclosure statements.

The need for expanded compliance examination procedures to assess the accuracy of disclosure data was clearly established during the study. Procedures to accomplish this purpose were developed and are summarized in Chapter 4. These suggested procedures include methods for assessing the accuracy of both geocoding and aggregation.

The increased effort that would be required to conduct the suggested compliance examinations was estimated to be at least 20 person years. Additional effort would be required to prepare the necessary examination procedures and to conduct training sessions for examiners.

CONCLUSION

The primary conclusion of this portion of the study is that a continuation of the Home Mortgage Disclosure Act must be accompanied by the suggested revisions to Regulation the preparation of supplementary guidelines, and an assessment of the accuracy of the data during compliance examinations. A substantial additional investment of resources will be required to perform the expanded compliance examinations.

CHAPTER 1

INTRODUCTION

1.1 PURPOSE

The purpose of this report is to present the study findings on the methods by which the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation can improve enforcement of the Home Mortgage Disclosure Act.

1.2 SCOPE

This study includes an assessment of the enforcement methods of the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation. An assessment of the enforcement methods of the Federal Reserve Board and the Comptroller of the Currency was outside the scope of this study.

To decide on the appropriate methods for enforcement of the Home Mortgage Disclosure Act, several important considerations must be understood and weighed. These are:

- The requirements of the Act and Regulation C
- The current methods of enforcement
- The current degree of compliance
- The impact of new enforcement methods on costs and budgets
- The relative importance of the Home Mortgage Disclosure Act vis-a-vis other laws and regulations that must also be enforced.

Given the finite resources available for enforcement, and the increasing number of laws to be enforced, one issue the regulatory agencies must resolve is to determine the proper level of enforcement and budget to allocate for enforcement of each law and regulation. Making the issue more complex is the fact that no matter how well an Agency designs a given examination and compliance program, way can be found to make improvements by increasing the Agency's knowledge of the status of industries compliance and by increasing (by enforcement and education) the degree to which the regulated industry is in compliance. Thorough research and analysis an produce more effective and more efficient methods, but the benefits and cost associated with implementing them must be weighed against other possible incentive programs and educational activities as well as the benefits and costs of the enforcement programs to be implemented in other areas.

This report is written with the difficulty and importance of these types of decisions in mind. In order to make such decisions a careful study must be made of the methods for enforcing all of the laws and regulations and their benefits and costs must be weighed and balanced against the available resources of personnel and funds. A study of all the laws and regulations to be enforced and the associated enforcement budgets was clearly beyond the scope of this study. However, the suggestions presented here on improved methods for enforcement of the Home Mortgage Disclosure Act although not balanced against other enforcement requirements and budget limitations are felt to be essential conditions to the continuation of the Home Mortgage Disclosure Act.

1.3 METHODOLOGY AND LIMITATIONS

The methodology used in conducting this study involved the following six steps:

(1) A review of the requirements of the Home Mortgage Disclosure Act and Regulations

(2) A review of the current enforcement methods employed by the Agencies. Information on these methods were obtained from three sources:

- Interviews with Washington-based personnel with examination experience
- Interviews with field examiners
- Attending a training course for examiners

(3) A review of current compliance problems. Information on current compliance problems was obtained from three sources:

- Interviews
- Results from the Accuracy Phase of the present study
- Results from the Completeness Phase of the present study

(4) An analysis of methods for improving compliance.

(5) An analysis of suggestions for improving Regulation C and Enforcement.

(6) An analysis of the costs associated with implementation of the suggestion for improving enforcement.

These six steps formed the basis for a sequential analysis of current enforcement methods. The analysis in each step is seen in the context of those that preceed it. Step two, for exampl a review of the current enforcement methods employed by the agencies is performed with the requirement of the Act firmly in mind. Similarly steps (4) and (5) -- methods for improving compliance and the analysis of suggestions for improving Regulation C and Enforcement are presented within the context of current compliance problems. This sequential analysis ensures that the conclusions resulting from the analysis of enforcement are directly relevant to current problems, activities, and resources.

The data contained in this report are drawn in part from the results of other phases of the study. The data on the nature and scope of current compliance problems was derived from the Accuracy and Completeness Phases of the study. Results the accuracy with which disclosure statements are currently being prepared are drawn from the Accuracy Phase of the study. These results are reported in full in the companion report "Accuracy of Disclosure Statement Preparation."[1] Findings on ambiguities in Regulation C resulting in compliance problems were analyzed in the Completeness Phase. These results are reported in full in the companion report, "Completeness."[2]

Steps (4) and (5) of the methodology, draw upon the discussion contained in, "Revisions to Regulation C."[3] The pupose of that report was to develop and discuss proposed revisions to Regulation C. The results of this analysis are discussed here because they are one of four methods for improving enforcement of the Act.

Step (6), a discussion of the costs associated with implementation of the suggestions for improved enforcement methods is drawn from the report, "Utility of the Home Mortgage Disclosure Act."[4] These findings are presented in terms of an estimate of the number of person years required to assess the accuracy of disclosure statements during compliance examinations.

1.4 REGULATORY REQUIREMENTS

Regulation C which was promulgated by the Board of Governors of the Federal Reserve System, specifies the requirements applicable to depository institutions subject to the Act. A copy of Regulation C is included in this report as Appendix A.

1.4.1 Exemptions

As prescribed in Section 203.3, three major categories of institutions that make federally related mortgage loans are exempt from the reporting requirements of Regulation C. These are:

(1) Any depository institution that has total assets as of the last day of its latest full iscal year of $10,000,000 or less

(2) Any depository institution that has neither a home office nor any branch office located in an SMSA

(3) Any state-chartered depository institution subject to mortgage loan disclosure laws of a state...that the Board determines... (has) requirement substantially similar to those imposed under the Act, and adequate provisions for enforcement.

1.4.2 Compilation and Disclosure Requirements

The requirements for compilation and disclosure of mortgage loan data are prescribed in Section 203.4 and 203.5 of Regulation C. These are summarized below.

Compilation of Mortgage Loan Data: Within 90 days of the end of its fiscal year, each depository institution is required to compile data on the mortgage loan activity for the fiscal year just ended. These mortgage loan data are to be aggregated separately for each standard metropolitan statistical area (SMSA) in which the institution has a home or a branch office, and to be itemized by census tract in a format similar to the specimen form HMDA-1 which is included in Regulation C (see Appendix A). The number and the dollar volume of mortgage loans that were originated or purchased are to be itemized separately in accordance with the following six categories.

(1) FHA, FmHA or VA loans on dwellings for four families or fewer

(2) Residential mortgage loans other than FHA, FmHA or VA (e.g., Conventional) on dwellings for four families or fewer

(3) The sum of categories (1) and (2) above

(4) Home improvement loans on dwellings for four families or fewer

(5) Home improvement loans and residential mortgage loans on dwellings of more than four families

(6) Home improvement loans and residential mortgage loans on dwellings for four families or fewer made to any borrower who did not intend to reside at the property as his principal dwelling.

Applicable SMSAs, Census Tracts and Zip Codes: The applicable SMSAs are those defined by the Office of Management and Budget (OMB) and in effect on June 28, 1976, or on the first day of the fiscal year for which an institution is reporting. The applicable census tract numbers and boundaries are those appearing on the census tract maps in the series 1970 Census of Population and Housing: CENSUS TRACTS, Final Reports, PHC Series" prepared by the Bureau of Census, United States Department of Commerce. The depository institutions are permitted to use maps, directories, or computer programs that have more recent definitions than those specified in the June 28, 1976 OMB information.

Public Disclosure: Depository institutions are required to make the mortgage loan disclosure statement available to the public within 90 days of the end of the relevant fiscal year or within 90 days of the date the depository institution becomes no longer exempt. The disclosure statement is to be available at the home office and in at least one branch office within every SMSA where the institution has branch office. The disclosure statement is to be made available to the public during normal business hours in a manner that allows for inspection or copying. Each mortgage loan disclosure statement is to be maintained and made available for a period of five years. Any depository institution whose home and branch offices are not convenient for public access is required to designate a convenient place for public assess or to furnish promptly by mail a copy of the disclosure statement to anyone requesting the information. A depository institution is required to notify its depositors of the availability of the disclosure statement at least once a year.

1.4.3 Sanctions for Violations

Section 305 of the Act prescribes that compliance with that Act shall be enforced under:

- Section 8 of the Federal Deposit Insurance Act is to be enforced in the case of
  - (A) National banks by the Comptroller of the Currency
  - (B) Member banks of the Federal Reserve System, other than national banks by the Federal Reserve Board
  - (C) Banks insured by the Federal Deposit Insurance Corporation (other than members of the Federal Reserve System) mutual savings banks and any other depository institutions not covered elsewhere in the Act by the Board of Directors of the Federal Deposit Insurance Corporation.
- Section 5(b) of the Home Owners Loan Act of 1933, Section 407 of the National Housing Act, and Section 6(i) and 17 of the Federal Home Loan Bank Act by the Federal Home Loan Bank Board, for institutions subject to those provisions.
- The Federal Credit Union Act, by the Administrator of the National Credit Union Administration, for credit unions.

Section 305 further indicates that in addition to the above. for purposes of enforcing compliance with any requirement of the Act, any of the Agencies may exercise any other authority conferred on it by law.

Section 203.6 of Regulation C states that a violation of the Regulation is subject to the sanctions provided in Section 305 of the Act. It further states that "an error in compiling or disclosing required mortgage loan data shall not be deemed to be a violation of the Act or this Part if the error was unintentional and resulted from a bona fide mistake notwithstanding the maintenance of procedures reasonably adopted to avoid any such error."

1.5 CONTENTS OF THIS REPORT

In the subsequent chapters of this report, the current methods of enforcement, our analysis of these methods, and suggestions on ways in which improvements in enforcement can be achieved are presented. In Chapters 2 and respectively, the methods currently being used by the Federal Deposit Insurance Corporation and the Federal Home Loan Bank Board to enforce the Home Mortgage Disclosure Act and Regulation C are discussed. In Chapter 4, findings the types of problems being encountered with the preparation of the disclosure reports are presented, along with an analysis of the methods for improving compliance and suggestions on ways the agencies can improve the enforcement methods. Also included in Chapter 4 is a discussion of the cost associated with these improved methods of enforcement.

CHAPTER 2

ENFORCEMENT METHODS OF THE FEDERAL DEPOSIT INSURANCE CORPORATION

This chapter presents a discussion of the methods employed by the Federal Deposit Insurance Corporation in its enforcement of the Home Mortgage Disclosure Act. The following five topics are covered in this discussion:

- Types of Examinations
- Examination Scheduling
- Examiner Training
- Examination Procedures
- Procedures for Non-Compliance

2.1 TYPES OF EXAMINATIONS

The Federal Deposit Insurance Corporation has instituted two distinct types of examinations to assess the performance of the depository institutions that are subject to its regulatory authority. One is the "safety and soundness" examination designed to assess the financial practices and the stability of the institution. The second is known as the "compliance" examination which is designed to assess compliance with consumer protection and anti-discrimination provisions of the following eight laws and regulations:

- Truth in Lending (FRB Regulation Z)
- Fair Credit Reporting Act
- Equal Credit Opportunity Act (FRB Regulation B)
- Real Estate Settlement Procedures (HUD Regulation X)
- Home Mortgage Disclosure Act (FRB Regulation C)
- Advertising of Interest or Dividends on Deposits (FDIC Part 329)
- Fair Debt Collection Practices Act
- Community Reinvestment Act
- Title VIII (Fair Housing Act) and FDIC Part 338

The compliance examination also includes three additional subjects that are not related to discrimination:

- Security and Controls Against External Crimes
- Financial Recordkeeping and Reporting of Currency and Foreign Transactions
- Emergency Preparedness Measures.

It is important to realize that the examination procedures for assessing compliance with the Home Mortgage Disclosure Act are only part of an overall set of procedures employed assess compliance with the entire family of "compliance" laws and regulations.

The rationale for having two separate types of examinations derives from the increasing legislative emphasis on consumer and antidiscriminatory practices, the realization that different methods are employed the two types of examinations, and the desire to develop more highly trained examiners to specialize in each type of examination. Before they undertake compliance examinations, examiners receive special training in the relevant laws regulations, and procedures at the Rosslyn Training Center located near Washington, D.C. Once the training is completed, the examiners conduct compliance examinations exclusively for a minimum period of six months. These compliance examiners are available to provide advice and guidance to banks under the jurisdiction of the Federal Deposit Insurance Corporation on methods for achieving compliance. The agency also has Regional Review Examiners (Consumer Affairs/Civil Rights) and Regional Counsels who are available to assist in this advisory role.

2.2 EXAMINATION SCHEDULE

The policy of the Federal Deposit Insurance Corporation currently is to perform a "compliance" examination at least once every 18 months for depository institutions under its jurisdiction. The policy is to perform financial "soundness" examinations at least once every 18 months as well.

Every effort is made to adhere uniformly to these policies in all regions. Additional examinations are performed when circumstances, such as a history substantial noncompliance, occur. The decision to perform additional examinations may be made at the regional office level or by the individual examiner. The specific schedule for examinations depends upon the examiner's workload which is a function of the number of problems that arise during the examinations.

2.3 EXAMINER TRAINING

Prior to beginning the minimum six months assignment to perform compliance examination, each examiner attends a two-week training course that is developed and taught by the FDIC's Training Center. The two-week course includes segments for each set of regulations covered in the compliance examination. These segments include examination instructions, examples, discussion, and case studies.

In 1978, a representative of JRB attended the segment of the training course dealing with HMDA. At this point in time, the overall training course was one week in duration, of which the HMDA segment comprised 50 minutes.* The materials used in the course included the basic FDIC instruction material, the HMDA-1 form, the Act and Regulation C, a case study and the Consumer Protection Handbook which is a compilation of FDIC instructions and the introductory comments of the manual prepared by the Comptroller of the Currency.[5]

The subjects covered in the 50 minutes period include:

- Brief description of the Act and its purpose
- General requirements of the Act
- Definition of reportable loans, with examples
- Jurisdiction for enforcement of the Act

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*With the expansion of the overall course to two weeks, the segment on HMDA has also been expanded. The discussion presented here, however, represents HMDA training as it was conducted prior to the expansion.

- Definition of SMSAs
- Census tract maps
- HMDA-1 and instructions
- Requirements for retention of the disclosure report
- Notice to depositors
- Basic examination procedures.

The presentation on HMDA was geared toward an analysis of whether the home mortgage disclosure data has been compiled and disclosed correctly by institutions subject to Regulation C.

The emphasis was on an explanation of the procedures to be used in assessing compliance with HMDA and a review of the institution's work papers to verify that the source on the data included on the disclosure report was appropriate. Much less emphasis was given to procedures designed to assess the actual content and accuracy of the data included in disclosure statements. In fact, no procedures were offered to check the accuracy of disclosure statements. The overall tone of the instructions offered was that given the severe time limitations facing examiners, the institution must be trusted to prepare an accurate statement and that undue time should not be spent in close checks of accuracy.

The case study included in the FDIC examiner's training manual consists of 11 questions on HMDA applicability. These include questions of jurisdiction, loans subject to disclosure, format, and general policy. Due to time limitations, these questions were not reviewed during the class. Written answers to the case study, along with references to the applicable Regulation C section numbers were, however, provided to each student at the end of the session.

The FDIC has been using the Comptroller's Handbook since July 1978. Each of the regions has a copy, and new trainees are provided with a copy. The Comptroller, like the FDIC, has a separate "Consumer Examination" for

Every effort is made to adhere uniformly to these policies in all regions. Additional examinations are performed when circumstances, such as a history substantial noncompliance, occur. The decision to perform additional examinations may be made at the regional office level or by the individual examiner. The specific schedule for examinations depends upon the examiner's workload which is a function of the number of problems that arise during the examinations.

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The FDIC has been using the Comptroller's Handbook since July 1978. Each of the regions has a copy, and new trainees are provided with a copy. The Comptroller, like the FDIC, has a separate "Consumer Examination" for eight regulations including those pursuant to HMDA, ECOA, and Title VIII. The Comptroller's Handbook like the FDIC' Handbook instructs, reviews, and gives examples of the requirements of HMDA. It includes a section on HMDA examination procedures which places emphasis on the bank's written policies and procedures and whether they have been followed. There are no instructions for verification of the accuracy of the data contained in the report. Section 1.4 of the Comptroller's Manual indicates that statistical sampling is not required for an evaluation of the disclosure report. The Comptroller's Handbook suggests a random selection of cases for reviewing the interest rates on savings deposits, but not for the disclosure report.

2.4 EXAMINATION PROCEDURES

To determine the specific procedures that are used during the portion of the compliance examination devoted to the Act the JRB study team reviewed the Comptroller' Handbook and the forms used during the exam, attended a training session for compliance examinations, conducted interviews with FDIC personnel with recent examination experience, and interviewed a compliance examiner in one region.

2.4.1 Forms and Instructions

In evaluating an institution's compliance with the Act, the examiner is required to use FDIC Form 6500/69 in conjunction with a five-page memorandum of instructions that explains and clarifies the questions to be answered. First the examiner must determine whether the bank is subject to the requirements of the Act or whether it is exempt. The instructions discuss the portion of Regulation C that defines which institutions making federally related mortgage loans are exempt from the requirements. If an institution has been granted an exemption by the Federal Reserve Board, the examiner is directed to obtain a copy of the disclosure report, but to make attempt to examine it for compliance with the relevant state requirement. If an institution is not to be examined, the disclosure report shall, nevertheless, be included as a part of the examiner' report, with an indication of why the bank has not been checked for compliance.

Form 6500/69 poses six questions to which the examiner must respond, and the memorandum of instructions provides guidance and examples to assist the examiner in obtaining and interpreting the institutions' responses to the six questions. The six questions and a summary of accompanying instructions are shown in Table 1.1.

The first five questions to be answered are specific in nature and deal with whether the report is in an acceptable format; available in each SMSA where the institution has a home or branch office; available for each fiscal year; available to the public and whether public notice of its availability has been given. The last question covers all other requirements of Regulation C When viewed in conjunction with the instructions given, it was originally unclear whether question (1) refered to issues of format only or also to matters relating to correct compilation of the data on the statement according to the substantive categories indicated on Form HMDA-1. This ambiguity has subsequently been resolved to make clear that the question refers to both sets of issues. If any of these six questions are answered in the negative, the examiner must provide an explanation of the nature of the violation and indicate the corrective actions that are to be taken immediately or that are promised to be taken by the management of the institution.

The instructions provided to examiners define the types of loans, methods for aggregating loans, geocoding addresses to census tract, and preparation of the report. They also indicate the proper means for identification of the institution, determining the reporting period, determining the relevant enforcement agency and SMSA for which the report is prepared. Examiners are given a list of SMSA's within the region and a listing of the address and telephone number for obtaining census tract maps prepared by the U.S. Bureau of Census. The instructions require that a copy of the disclosure statement be included in the examiner's working papers in all cases for which such a report exists. Significantly, there is no discussion of methods to check for the accuracy of the information included in the disclosure statement.

TABLE 1.1: HMDA EXAMINATION QUESTIONS AND INSTRUCTIONS

QUESTION NUMBER	QUESTION	SUMMARY OF INSTRUCTION
1	Is the bank compiling its mortgage loan data in a format similar to form HMDA-1 for each SMSA in which it has a home or branch officer?	The instructions define and give examples of the type of loans to be included in the disclosure statement, and how those loans are to be categorized. The method for geocoding is described.
2	Are the mortgage loan data being compiled for each fiscal year beginning with the last full fiscal year ending prior to July 1, 1976?	The instructions are concerned with the initial reporting period under the Act.
3	Are the bank's mortgage loan disclosure statements being made available to the public by the prescribed due dates?	The period for preparation of the report is 90 days from the close of the bank's fiscal year.
4	Are the bank's mortgage loan disclosure statements being made available to the public for inspection or copying at the prescribed offices?	The discussion details for the examiner where the reports are to be available when an institution has branch offices. It also describes the requirement for availability of the report to the public, the copying requirement and need for the retention and availability of the disclosure statement for five years.
5	Is the bank making an appropriate effort at least once each year to notify its depositors of the availability of its mortgage loan data?	Discussion is of appropriate means of notice to bank depositors as to the availability of the HMDA data.
6	Is the bank complying with all other requirements of Regulation C?	The examiner is instructed to include miscellaneous comments such as exorbitant copying charges or delay in making data available upon request from the public.

2.4.2 Practice in the Field

To determine the actual practice in the field, JRB personnel conducted interviews with several FDIC personnel with examination experience (including a current field compliance examiner) and attended the examiner training session. Although these interview findings are not indicative of procedures in all regions, they do provide considerable insight into compliance examination procedures.

In addition to the uniform instructions for the Act and the training materials, the regional offices may provide further general guidance on methods for conducting the examination. However, beyond the general guidance given and Form 6500/69 and its associated instructions no "check lists" or detailed procedures are provided. Rather the compliance examiners develop procedures over time and informally pass them along to other examiners. Each regional office does provide compliance specialist to answer questions and give direction on all portions of the examinations.

The compliance examiner first establishes that the institution must comply with the Act and that it is under FDIC jurisdiction. The basic information for the examination is gathered during an interview with the management of the institution. The interview provides information about:

- Existence of the report
- Timeliness in preparation
- Availability to the public
- Notice to depositors
- Arrangements for providing copies to the public.

The examiner reviews the disclosure statement and the associated working papers with the management of the institution. The examiners we interviewed indicated that the two most frequent deficiencies encountered with the disclosure statements are the lack of reporting date or a SMSA indicator and inaccuracies in mathematical totals. These are errors which can be detected by inspecting the statement, and the institution's managers usually make corrections when the errors are pointed out. To verify the adequacy of public notice and the availability of the disclosure statement to the public, the examiner typically observes the notice posted in the lobby of the institution and poses questions to the institution's staff. The most stringent type of review procedures is a spot-check of the actual loan records to evaluate the overall recordkeeping practice. Unless there is some problem with the overall recordkeeping practices of the institution, an examiner would not usually spot-check or sample the disclosure data. The examiner indicated that, in all cases, the working papers would be reviewed to determine how the statement was prepared, but that the use of geocoding tools and procedures and test for accuracy were not part of the examination. Consumer complaints are always acted upon when they are received by the field or regional offices. A complaint may trigger a visitation to a bank between regularly scheduled compliance examinations.

Upon completion of the compliance examination, all of the reports for each set of regulations are reviewed in the Regional office and a copy is forwarded to the Board of Directors of the institution for their review and confidential handling. The exception is all uninsured savings and loan associations which are under the jurisdiction of the FDIC only for purposes of compliance with HMDA. In such cases, the S&L is reveiwed annually for compliance, and the report is completed and retained by the regional office. If any errors or violations are uncovered in the course of the examination, a letter is sent to the Board of Directors indicating the corrections to be made.

Assuming no major compliance problems were found, the examiner estimated that the portion of the examination devoted to the Act would occupy 2 to 4 hours of the approximately 30 hours required to conduct a complete compliance examination. Because much of the checking for the Act is intertwined with checking for compliance with other regulations (e.g., Regulation B, Regulation Z), it is not possible to isolate the exact level of effort devoted exclusively to the Act.

2.5 PROCEDURES FOR NONCOMPLIANCE

Regulation C is an institutional recordkeeping requirement. The aspects of compliance most relevant to such a recordkeeping requirement are the existence, notice, and availability of the disclosure report and its preparation in a timely manner. The consumer and antidiscrimination practices of the bank associated with the loans are not at issue with HMDA as they are with Table VIII, ECOA, Truth in Lending and Real Estate Settlement Regulations.

Precisely what would constitute an actionable violation of HMDA is not clearly defined in Regulation C or the instructions to examiners. Section 203.6(b) of the regulation indicates that unintentional errors in compilation or disclosure which result from bona fide mistakes do not constitute a violation, if procedures exist to avoid the error. A disclosure statement which has errors due to ambiguities in Regulation C clearly seems to be in this category. In practice, no effort is made to distinguish between a violation and an error since in either case corrections must be made.

If it is discovered during the course of an examination that an institution has not prepared a disclosure statement, or if the statement is found to contain significant errors, a series of steps are taken:

- Institution makes correction immediately while the examiner is still there or promises to make correction
- The examiner's report, noting any apparent violations and promises of corrective action, is filed with the regional office
- A letter transmitting the examiner's report is sent by the regional office to the institution's Board of Directors outlining the errors or violations and requesting necessary corrective action
- The regional office follows up on the transmittal in an appropriate manner through direct communication with the bank

- In some cases, follow-up examiner visitations or more frequent compliance examinations are scheduled
- If there is still no corrective action, the region recommends to FDIC's Board of Directors that a cease and desist order be obtained through a Section 8(b) action.

When an examiner does find an apparent violation of the requirements, it is to be noted on his report, along with the agreed upon corrective action.

In general, an 8(b) action would not be initiated merely for a violation of HMDA, but such an action is taken when a variety of persistent violations are found. It is, however, possible to have an 8(b) action for a violation of HMDA alone, if the institution simply refuses to comply voluntarily.

Every three to six months, field offices send to the region a list of institutions with compliance problems. The regional office is not required to give any special attention to the "offenders list." A national list of "supervisory problems" is maintained in Washington. Institutions are added on to that list because of a continuing pattern of noncompliance. All institutions on that list are not necessarily recommended by the Region for 8(b) action.

CHAPTER 3

ENFORCEMENT METHODS OF THE FEDERAL HOME LOAN BANK BOARD

This chapter presents a discussion of the methods employed by the Federal Home Loan Bank Board in its enforcement of the Home Mortgage Disclosure Act. The following topics are covered:

- Type of Examination
- Scheduling Examination
- Examiner Training
- Examination Procedures
- Procedures for Noncompliance

3.1 TYPE OF EXAMINATION

A single examination is conducted by the Bank Board for institutions under its jurisdiction. This examination includes a review of an institution's financial policies practices and status, as well as its compliance with the Home Mortgage Disclosure Act and Federal nondiscrimination regulations (e.g. FHLBB 528, 531.8; Regulation B). The Federal Home Loan Bank Board feels strongly that this single integrated approach to examinations provides a thorough and complete picture of an institution's behavior.

3.2 EXAMINATION SCHEDULE

Each Federal Home Loan Bank Board district office examines the associations under its jurisdiction as frequently as its resources allow, and, as a result, the time between examinations averages 14.6 months If an association is found during the scheduled examination to be in serious violation of regulatory requirements, a follow-up visitation may be scheduled. The district director and the district supervisory agent have the authority to determine whether a follow-up visition is to be conducted.

3.3 EXAMINATION TRAINING

Federal Home Loan Bank Board examiners are required to take a four-week training course in examination objectives, content, and procedures. These courses cover both the financial and nondiscrimination aspects of the examination.

In the current four-week course, the following sessions are devoted to nondiscrimination:

- Total view of purpose and objectives of nondiscrimination regulations (Theory) - 8 hours
- Simulated examination of nondiscrimination regulations - two evenings (about 6 or 8 hours).

The emphasis in the training session is to provide the examiners with a thorough understanding of the objectives and purposes of the regulations. Although the mechanics of the examination process are taught in the simulated examination sessions, the stress is placed on an understanding of the regulations themselves.

The course material includes a Participant's Manual of objectives and procedures,[7] case studies used as examples in lectures, and directions for the simulated examination. In addition, examiners are provided with Memorandum #T-62 Implementing Regulations Home Mortgage Disclosure Act) which is an outline of the provisions of Regulation C. Procedures for assessing the accuracy of home mortgage disclosure statements are not addressed in the training course. Examiners are encouraged in the training course to use the disclosure statement to determine if an association is engaged in discriminatory lending practices.

During 1979, the Federal Home Loan Bank Board took additional steps to increase the knowledge of its field staff with the nondiscrimination regulations and Regulation C. All examiners, civil rights specialists, and other field staff members participated in a two and one-half day seminar devoted to these regulations.

3.4 EXAMINATION PROCEDURES

To determine the procedures used by Bank Board examiners in ascertaining compliance with the requirements of HMDA, various Bank Board personnel both in Washington and in the district office were interviewed. Among these were individuals with examination experience.

3.4.1 Procedures and Instructions

The general policies objectives, and procedures employed by the Federal Home Loan Bank Board in conducting its examinations are set forth in a publication entitlod "Examination Objectives and Procedures Manual."[8] These general objectives and procedures are amplified by a second publication entitled "Examination Programs.[9] Portions of the Examinations Questionnaire pertaining to examinations associated with the Home Mortgage Disclosure Act were extracted from the Examination Program set and made available to the JRB study team. The Examinations Questionnaire includes five questions to be used by examiners in evaluating an association's compliance with tha Home Mortgage Disclosure Act. These are:

- Is the association subject to Regulation C? (203.3)
- If yes, was applicable lending properly classified and reported? (FORM HMDA-1 Mortgage Disclosure Statement 203.4)
- Are disclosure statements made available on a timely basis and in the manner required by Section 203.5?
- Are depositors notifed annually of the availability of disclosure statements? (203.5[b]
- Does your review of the disclosure statement in conjunction with the lending review indicate discriminatory practices?

Clearly, the last question is outside the scope of the disclosure requirements of the Home Morgage Disclosure Act and Regulation C.

The examiner prepares a report covering the results of the examination. If the examiner finds violations of the requirements of the Home Mortgage Disclosure Act or Regulation C, these are noted in the examination report. A copy of the disclosure statement is not included in the examiner's report or working papers The examination report is reviewed by the district supervisory agent. The supervisory agent discusses any violations that were found with the association and prescribes the necessary corrective actions. A nondiscrimination compliance officer is assigned to each district to provide assistance to the supervisory agents and examiners.

3.4.2 Practice in the Field

To achieve a better understanding of the procedures used in Bank Board examinations, enforcement personnel in Washington and in disctrict offices were interviewed. The following information from these discussions may not be representative of procedures in all districts, but it provides insight into actual field practices.

The examination of an institution typically averages two to three weeks, depending on size of the institution and the number of examiners assigned. Of this time, about 25 percent is devoted to a review of the nondiscrimination requirements.

During the examination, information is gathered through interviews with the association's staff and through review of their work papers and reports. Exami are encouraged to perform integrated review of the activities associated with all the regulations. The JRB study team was told that these procedures provide specific instructions and methods for conducting the examination, as well as a discussion of the objectives and purposes of the examination.

Examiners are responsible for on-site inspection of association practices and procedures and for preparation of a complete report based on the examination. The supervisory agent in the district is responsible for reviewing the examination reports, informing the association of any violation uncovered in the examination and establishing with them an acceptable plan for correcting violations. The supervisory agent decides on the appropriate action in cases where voluntary corrective action (i.e., compliance does not occur. The Bank Board's General Counsel is also consulted for further action.

All of the Bank Board personnel interviewed described the Home Mortgage Disclosure Act requirements as a recordkeeping regulation. The examination procedures for the Home Mortgage Disclosure Act was felt to concentrate on "procedural" aspects such as timeliness availability and notice, rather than accuracy. (The issue of whether accuracy was an important consideration was specifically addressed in these discussions). The study team was told that some attempts may be made to determine the accuracy of categorization of loans, but that geocoding accuracy was too difficult to ascertain and was beyond the scope of the compliance examination. At the same time, several interviewees said that the disclosure data were used to locate census tracts where no loans were being made, as possible evidence of redlining practices.

If a consumer files a complaint against an association, the consumer is referred to an official assigned to this function in the Federal Home Loan Bank in each district.

3.5 PROCEDURES FOR NONCOMPLIANCE

Any violations of the Act, no matter how small, are to be recorded in the examination report by the examiner. The supervisory agent reviews the examination report and encourages the association to undertake voluntary corrective action. Although a cease and desist order can be sought, our interviewees did not know of an instance where an association did not take voluntary corrective action. The enforcement actions to be taken by the supervisory agent for violations of the Home Mortgage Disclosure Act are not rigidly defined. Conversely, the enforcement policy for handling violations of other nondiscrimination regulations are carefully defined in terms of mandatory and discretionary actions. They refer to violations of Part 528 (Fair Housing Act) and Section 531.8 of the Bank System Regulations, but they are not applicable to HMDA.[10]

A list of associations with a history of repeated violations in their financial practices or in their nondiscrimination practices is maintained in each district office and in Washington. This list is used for general information only, and separate files are not maintained on the specific types of financial and nondiscrimination problems that were encountered.

In summary, the Bank Board procedures require that any violation of the Home Mortgage Disclosure Act be reported — whether or not the violation is an intentional or unintentional error. Voluntary corrective action of violations is encouraged, and apparently most associations do make such corrections voluntarily.

CHAPTER 4

ASSESSMENT AND IMPROVEMENT OF ENFORCEMENT METHODS

This chapter presents an assessment of the methods currently used by the sponsoring agencies in enforcing the Home Mortgage Disclosure Act. Based on this analysis, conclusions are reached on specific steps that should be taken to improve enforcement.

First the findings of the accuracy and completeness analysis are summarized. These are presented to provide a baseline against which to assess the adquacy of current enforcement methods and to provide insight into areas where improvements are needed. Next, methods by which improvement in compliance can be achieved are described briefly. Finally a discussion is presented of the specific steps to be taken to achieve these improvements.

4.1 ACCURACY PROBLEMS WITH MORTGAGE DISCLOSURE DATA

This section presents the findings of the Accuracy and Completeness phases of the study. The accuracy findings are in two areas, Geocoding and Aggregation, and along with Completeness summarize the study findings on the problems associated with home mortgage disclosure data.

4.1.1 Accuracy Findings

In the accuracy phase of the study, an assessement was made of the two major processes involved in the preparation of a disclosure statement — geocoding and aggregation. Geocoding is the process of assigning a census tract to the address of the residential property for which a loan was originated. Aggregation is the process by which data on mortgage loans (e.g., amount, type of loans, type of property, census tract) are collected recorded, selected, processed, and reported on disclosure statements. Assessment of the accuracy with which these two processes are performed provides measure of how accurately the disclosure statements prepared by subject institutions reflect the actual lending patterns of these institutions.

The accuracy of geocoding was based upon a statistical sample design which provided for the random selection of 14, 15, and 30 sampling units of 50 loans each in the Buffalo, San Diego, and Chicago SMSAs, respectively. The 59 sampling units were randomly selected with replacement in accordance with the number of loans disclosed by each institution in the SMSA; consequently, more than one sampling unit was selected from some institutions. The sampled loans were regeocoded under carefully controlled procedures and these results were compared with the geocoding results of the depository institutions to determine the number of geocoding errors made by depository institutions. This analysis enabled statistically valid estimates to be made of the level of geocoding accuracy achieved by all institutions within each SMSA.

The assessment of aggregation accuracy was more complex than the assessment of geocoding accuracy because of the great variety of ways in which aggregation errors could occur. These errors can be mode by; a) including a loan in the wrong census tract line, b) including a loan not meeting Regulation C criteria for inclusion in the disclosure statement c) including a loan under the wrong "type of loan" or "type of dwelling" column in the disclosure statement, or d) incorrect computation. The sampling method used in assessing the accuracy of aggregation entailed the random selection of a sample of census tract lines from the disclosure statements of the 43 depository institutions participating in this part of the study. Fifteen census tract lines were selected for each of the 59 aggregation sampling units, and representatives from the examination staff of the regulatory agencies obtained loan data from the files of the depository institutions for the selected census tracts. These data were compared against the data in the disclosure statement to determine the number and amount of errors associated with each census tract line.

The number of aggregation errors and the dollar amount of the aggregation errors found in each sampling unit of 15 census tracts are only meaningful when viewed relative to the overall number and amount of loans that were included in the census tracts. Accordingly, two major indices, expressed as percentages, were used to assess each institution's aggregation error level. The first index is the number of errors made per census tract relative to the number of loans per census tract. The second index is the dollar amount of errors made per census tract relative to the dollar amount of loans per census tract. Some institutions incurred significant error levels on the basis of the number of errors per loan in each census tract, while other institutions incurred significant error levels on the basis of the dollar amounts of error per amount of loans in each census tract.

A judgment was made that error levels in excess of 20 percent, on the basis of either the number or the amount of error, render a disclosure statement too misleading to be considered acceptable. An error level between 10 and 20 percent was judged to render the acceptability of a disclosure statement to be marginal. An error level of less than 10 percent was judged to result in an acceptably accurate disclosure statement.

Geocoding Accuracy Findings: A statistically valid estimate of the geocoding accuracy achieved by institutions in each of the three SMSAs is shown in Table 4.1 in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval.

TABLE 4.1: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN BUFFALO, CHICAGO, AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
Mean Percentage of Accuracy	93.16	92.05	82.27
Standard Percentage of Error	1.51	1.49	3.11
95 Percent Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

On the basis of these results, it can be stated with 95 percent confidence, that the level of geocoding accuracy for institutions in the Buffalo, San Diego, and Chicago SMSAs lies between 90.2 96.1 percent, 89.3- 95.0 percent, and 76. 88.4 percent respectively. The levels of geocoding accuracy being achieved in Buffalo and San Diego SMSAs were considered to be acceptable, but the level of geocoding accuracy being achieved in the Chicago SMSA was considered to be marginal.

A further investigation revealed that 35 percent of the institutions in the Chicago SMSA (e.g., 9 of 26 institutions) achieved unacceptable accuracy levels below 80 percent. The accuracy levels of these institutions ranged from 42.5 to 78 percent.

Two reasons account for the low accuracy levels achieved by 9 of the 26 sampled institutions in Chicago. Six of the nine relied solely on census tract maps or other maps to perform geocoding. Such maps, by themselves, are not adequate for geocoding. Three of the nine either did not use address coding guides properly or did not accurately record and maintain the results of their geocoding of addresses to census tracts.

Aggregation Accuracy Findings: The results from the aggregation analysis for the three SMSAs are shown in Table 4.2 in terms of the number and percentage of institutions that were found to be in each of the three error levels. An institution was placed in one of the three error levels in accordance with the higher of its two error levels (i.e., number or dollar amount of errors).

TABLE 4.2 PERCENTAGE OF AGGREGATION ERRORS BY INSTITUTIONS IN THREE SMSAs

Error Level Per Census Tract	SMSA						TOTAL	
	Buffalo Institutions		San Diego Institutions		Chicago Institutions			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-10 Percent	1	12.5	2	20	2	8	5	11.6
10-20 Percent	3	37.5	3	30	3	12	9	20.9
Greater than 20 Percent	4	50.0	5	50	20	80	29	67.5

Fifty percent of the institutions in the Buffalo and San Diego SMSAs and 80 percent of the institutions in the Chicago SMSA incurred aggregation accuracy error levels greater than 20 percent. The most significant problem was census tract assignment errors caused by aggregating loans into the wrong census tract line. The errors occurred because of inadequacies in the institution's procedures for selecting loans from the files transferring these data to other files and aggregating the data into the disclosure statement. A second significant source of error, particularly with institutions in San Diego, was the inclusion of inappropriate loans (e.g., short-term construction loans) in the disclosure statement.

Although the findings of aggregation accuracy are not based upon a statistically derived sample for the SMSA, nevertheless they do provide strong evidence that many depository institutions are not aggregating the disclosure data accurately.

The findings on accuracy can be summarized as follows:

- The levels of geocoding accuracy achieved by 35 percent of the institutions in the Chciago SMSA were unacceptably low
- The levels of aggregation accuracy achieved by 50 percent of the institutions in the Buffalo and San Diego SMSAs and 80 percent of the institutions in the Chicago SMSA were unacceptably low
- Steps need to be taken to identify institutions with unacceptably low levels of geocoding and aggregation accuracy and to raise their accuracy to accceptable levels.

4.1.2 Completeness Findings

The purpose of the completeness analysis was to estimate the number and amount of residential mortgage loans originated by various types of lenders in Cook County Illinois San Diego County, California; and Erie County, New York; and to determine the percentage of the total volume attributable to depository institutions subject to Federal or state disclosure reporting. This analysis is discussed in detail in a companion study report, "Completeness."[2]

A data base of all calendar year 1977 mortgage loan originations involving a change of property title was obtained for each of the three counties studied. For San Diego and Erie counties, these data were derived from the records of the county recorder's office, and for Cook County, they were obtained from a title company.

To the extent that the data for each county would permit, loans were selected from the data base in strict accordance with Regulation C criteria. The Regulation C criteria for inclusion of assumed, refinanced, and construction loans, however, were found to be ambiguous. Findings from the accuracy phase of the study indicated that many depository institutions were not reporting these categories of loans in accordance with the intent of Regulation C Because of these two observations, a separate study investigation was undertaken for San Diego County using mortgage data from the State of California. The purpose of this study investigation was to assess the impact on the portrayal of lending patterns of inclusion or exclusion of these data from disclosure statements.

Assumed Loans: The ambiguity surrounding assumed loans begins with the definition of the loan type itself. In San Diego, state-chartered institutions are required to accept assumptions under the ruling in "Wellingcamp vs. Bank of America". This requires a written "release of liability" agreement with the new mortgagor releasing the original mortgagor from the liability. Some might consider a standard definition of an "assumption" to mean continuation of the existing mortgage at the same interest rate. In practice, many depository institutions in San Diego increase the interest rate yet retain the term "assumption" in referring to the transaction.

Many federally-chartered depository institutions do not allow assumptions. Instead, their trust deeds contain a "due on sales clause" specifying that if there is a change of owner, the trust deed becomes due and payable.

Regulation C does not specify criteria for assumed loans. According to an unofficial opinion rendered by staff of the Board of Governors of the Federal Reserve System, the intent of Regulation C is that assumed loans be included in disclosure statements if the depository institution has a written "release of liability" agreement with the new mortgagor.[11] In such an instance, only the amount of the remaining balance should in included.

Not at all surprisingly, ambiguities in the definition and inclusion criteria in Regulation C for assumed loans result in errors in preparation of the disclosure statement. Indeed, assumed loans are not included in the disclosure statements prepared by the State of California for state-chartered depository institutions. This was not a small omission, for in 977 9,500 first trust deeds were assumed. Thus, most assumptions representing in excess of 20 percent of all mortgage loans in San Diego County re not reported. This failure to report was not consistent with the intent of Regulation C.

Refinanced Loans: Regulation C does not specify criteria for the inclusion of refinanced loans. The intent of Regulation C is that refinanced loans be included in disclosure statements in the full amount of the refinancing.[11] In practice, refinanced loans are included in disclosure statements prepared by the State of California. Accuracy audits conducted for this study reveal confusion among depository institutions over the handling of these loans. They indicate that many institutions are either not including refinanced loans at all, or not including them in the full amount A related problem is that some institutions are including refinances in disclosure satements when they should have been excluded because of the purpose of the loan.

Construction Loans: The criteria for construction loans are also causing confusion. Regulation C specifies that loans for temporary financing (e.g. construction loans) should not be included disclosure tatements. The term "temporary financing," however, is not defined. Nevertheless the intent of Regulation C is that a construction loan should be included in disclosure statements when its term extends beyond "temporary financing."[11]

Accuracy audits conducted for this study show that confusion over the definition of construction loans is mirrored in disclosure statements. The audits show confusion among a significant number of institutions over inclusion of these loans. This confusion is caused, at least in part, by "construction by owner" loans. These are long-term loans under which the owner pays interest only until occupancy. These "construction by owner" loans are included in disclosure statements prepared by the State of California.

A special investigation of mortgage lending by 34 state-chartered depository institution in San Diago revealed that together, construction loans and refinanced loans accounted for approximately 17 percent of loans originated by these institutions.

Implications: The dual problems of the absence of explicit criteria in Regulation C, and errors committed by those preparing disclosure statements have important implications for all involved in the disclosure process. For each participant, the implications are different and are listed below:

- Regulatory Agencies: These agencies must continually pursue ambiguities in existing definitions, formulate more precise criteria, inform depository institutions, and enforce the criteria
- Depository institutions: These institutions need better guidance on criteria. Many need to follow criteria more carefully
- State Regulators: State criteria should conform to Regulation C criteria
- Current Users of Disclosure Statements: These individuals need to exercise great care in using data compilations derived from disclosure statements. Otherwise, they will be unwittingly misled as to the contents of their compilations
- Researchers These individuals need to exercise great care in the criteria used to select loans for their analyses.

4.2 METHODS FOR IMPROVING COMPLIANCE

There are four general methods by which the sponsoring regulatory agencies can improve the ability of depository institutions to comply with the provisions of the Home Mortgage Disclosure Act. These are:

- Publishing regulations that are clear, unambiguous, and that provide workable basis for enforcement
- Establishing adequate training for regulatory agency personnel
- Establish programs to educate and assist the regulated industries in meeting the requirements
- Establishing examination and compliance methods and procedures that will determine the extent to which compliance requirements are being met and that will provide feedback to the agencies and to the regulated industries.

The focus of this report is on the fourth method -- examination and compliance procedures. The other areas, however, -- clarity of regulations, the level of training of agency personnel, and education programs to assist industry -- are also discussed briefly, for these both complement and influence enforcement methods.

Suggested revisions to Regulation C are discussed in a companion study report, "Revisions to Regulation C."[3] These suggested revisions that have a significant impact on enforcement methods are summarized in the next section.

The types and levels of training needed by examination personnel obviously depend upon the nature of the compliance examinations that are to be conducted. The training implications that derive from the more extensive examination methods suggested in this report are also discussed in the next section.

A study conclusion was that the accuracy of disclosure statements could be improved by providing depository institutions with supplementary guidelines to: clarify Regulation C, explain areas of potential misunderstanding, and provide suggestions for preparation of the disclosure statement. This conclusion was based upon the findings of the accuracy and completeness investigations wherein it became evident that the preparation of a disclosure statement that is consistent with the definitions and requirements of Regulation C entails dozens of decisions and steps each with a possibility for error. This observation led to the conclusion that depository institutions are unlikely to prepare disclosure statements that are completely consistent with the definitions and requirements of the regulation unless they have and follow carefully prepared written guidelines or instructions.

Required Improvements in Compliance Examination Methods: The methods and procedures used by the regulatory agencies in conducting compliance examinaions associated with home mortgage disclosure reporting need to be revised and extended to provide for an assessment of the accuracy of the data. This conclusion is based upon two findings. First the findings of the accuracy analysis indicate that a significant number of depository institutions were ncurring either geocoding or aggregation error rates greater than 20 percent. These or greater error rates are considered to be unacceptably high. Second, the findings of the study of examination methods and procedures used by the depository institutions indicate that specific procedures for assessing the accuracy of disclosure data have not been developed. Indeed, an objective and an accomplishment of this study was the development of procedures for assessing the accuracy of home mortgage disclosure data. These procedures are described briefly in the following section, and estimates are made of the additional burden required to implement them.

4.3 SUGGESTIONS FOR IMPROVEMENTS IN REGULATION C AND ENFORCEMENT

The suggestions for improvements in Regulation C and in enforcement are discussed under the following three topics:

- Supplementary Guidelines
- Revisions to Regulation C
- Examination Procedures to Assess the Accuracy of Home Mortgage Disclosure Act Data.

4.3.1 Supplementary Guidelines

Regulations are intended to be definitive and unambiguous, but they are not intended to provide step-by-step instructions for compliance with the requirements they impose. Even though regulations might be definitive, they do not, in themselves provide at adequate basis for an operational procedure that will guarantee adequate compliance.

To improve understanding of and adherence to Regulation C, it is suggested that supplementary guiedelines be developed and provided to depository institutions to explain areas of greatest potential misunderstanding and to provide guidance on methods for preparation of the disclosure statement. The guidelines would address the following topics directly related to the regulations:

- Definitions
- Who must comply
- Types of loans and data to be included
- Types of loans to be excluded
- Geocoding tools types, availability, and tradeoffs
- Report format -range of flexibility
- Range of content and format of exempted state-chartered institutions
- Reporting period and due date
- Public notice
- Availability and copying.

In addition to the above clarifications to Regulation C, the suggested supplementary guidelines would include the following:

- Suggested step-by-step instructions
- Completed report with annotations
- Disclosure statement completion checklist.

The step-by-step instructions would "walk" the individual preparing a disclosure statement through the collection of data on worksheets, geocoding, and aggregation in columns of the disclosure statement. These instructions would be accompanied by annotated illustrations of completed statements.

A checklist would be included in the supplemental guidelines (see Figure 4.1) to provide a self-test of adherence to elements of the regulations that are most likely to be misunderstood. The use of such a checklist would go far in reducing the types of errors found most prevalent in the institutions that were investigated during the Accuracy Phase of our study.

4.3.2 Revisions to Regulation C

The suggested revisions to Regulation C that have an impact upon enforcement are shown in Table 4.3 under two major headings: Preparation of Disclosure Statements and Compiling or Comparing Disclosure Statements.

Preparation of the Disclosure Statements: As shown in the table, three topics and eight problem areas associated with the preparation of disclosure statements were identified. Four suggestions are made in conjunction with the first topic, geocoding. The first suggestion is to specify the U.S Department of Commerce as the current source for the definition of SMSA boundaries. The second suggestion is to augment the discussion on the 1970 census tracts with discussion on the new 1980 census tracts. The third suggestion, relating to the use of improper geocoding tools, derives from problems found in Chicago wherein many institutions were using improper geocoding tools. It is suggested that the use of geocoding tools be addressed in the supplementary guidelines rather than in Regulation C. The fourth suggestion is to revise the regulation to provide that in instances where the available addresses coding guidas or other acceptable goecoding tools do not enable a property address to be geocoded to a census tract; then, institutions must either geocode using other means or itemize the loan by the zip code of the property address.

CHECK LIST FOR
PREPARATION OF DISCLOSURE STATEMENT

		YES	NO
1.	Have business loans, consumer loans, and temporary consturction loans been excluded?	☐	☐
2.	Have loans on unimproved land been excluded?	☐	☐
3.	Are all condominiums classified as single family dwellings even when five or more condominium units are involved?	☐	☐
4.	Does the multi-family dwelling column include both residential motgage loans and home improvement loans for both occupants and non-occupants?	☐	☐
5.	Does the addendum item exclude multi-family dwellings?	☐	☐
6.	Does the addendum item include both residential mortgage loans and home improvement loans on non-occupant property?	☐	☐
7.	Has each mortgage loan counted in the non-occupant loan column (addendum item) been counted also in at least one other column?	☐	☐
8.	Has the full amount of the new principal balance been included for refinanced loans where the depository institution and the borrower are the same on both the existing and the refinanced loan.	☐	☐

NOTE: If the answer to any of the above questions was "no," a pattern of error will exist in the Mortgage Loan Disclosure Statement.

FIGURE 4.1: EXAMPLE CHECK LIST

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
PREPARATION OF DISCLOSURE STATEMENTS					
Geocoding (Assigning property addresses to census tracts)	The references to OMB as the source for definitions of SMSA boundaries are now obsolete. The Department of Commerce now has responsibility and authority for definitions of SMSA boundaries.	Yes	Yes	Delete references to OMB and specify the Department of Commerce as the source of definitions for SMSA boundaries.	None
	Regulation C does not address the use of updated definitions of census tracts and their boundaries.	N/A	Yes	Add discussion of the use of the new 1980 census tracts and their boundaries.	Minimal cost for update of geocoding tools.
	Geocoding tools are not defined or discussed.	N/A	No	Include discussion of geocoding methods and tools in Supplementary Guidelines.	None
	No method has been provided for resolving problem addresses in tracted areas.	N/A	Yes	Require that addresses not in geocoding tools be itemized by zip codes.	None
Aggregation (Compiling disclosure statement)	Types of loans that should be excluded are sometimes included even where Regulation C is definitive and explicit.	Yes	Yes	Supplementary Guidelines to clarify loans to be included. Define temporary financing, clarify applicable construction and refinanced loans	Reduce Confusion
	Non-occupant loans are often not also included under at least one other column.	N/A	Yes	Clarify reporting on non-occupant loans; differentiate non-occupant mortgages & home improvement loans.	None
	Aggregation errors: 1) loans in the wrong census tract line 2) including loans not meeting Regulation C criteria 3) designating loans under wrong category 4) incorrect computation.	N/A	N/A	Step-by-step compilation procedures included in Supplementary Guidelines.	None
Audit Trail (Link from loan roster to disclosure statement)	Examiners experience difficulties in tracing aggregated disclosure data back to individual loans.	No	Yes	Require retention of listing of loans included in disclosure statement. Listing to include loan number, census tract, address type of loan and dwelling, amount.	Minimal if data base is automated; moderate change in procedures if manual.
COMPILING OR COMPARING DISCLOSURE STATEMENTS					
Standard Format and Content	Format and content of statements produced by some institutions are substantially different from Regulation C guidelines.	N/A	Yes	Require institutions to prepare statement in standard format.	Minimal except for current state exemptions
Differences in Fiscal Years	Reporting currently required on fiscal year basis. Differences in fiscal years make it difficult to compare statements or generate summary reports that aggregate institutions.	Yes	Yes	Require all institutions to report on a calendar year basis.	Small, unless state-chartered institutions are required by state to report on a fiscal year basis.
State Exemptions	Exemptions have been granted to states whose disclosure statements are substantially different from Regulation C.	No	No	Agencies define "substantially similar" and require strict compliance with definition prior to granting exemption.	Increased difficulty in negotiating state exemptions

TABLE 4.3. SUMMARY OF SUGGESTED REVISIONS TO REGULATION C

Three suggestions are made in conjunction with the second topic, aggregation. The first suggestion is to revise Regulation C to define explicitly the criteria for temporary financing, refinanced loans, and assumed loans and, in addition, to amplify these criteria in the supplementary guidelines. These two steps will reduce problems found during the accuracy analysis. The second suggestion addresses two problems associated with the nonoccupant addendum term in the disclosure statement One problem is that many institutions do not include nonoccupant loans in the other columns, in spite of the fact that Regulation C explicitly requires that this be done. The other problem is the inability to differentiate between nonoccupant mortgage loans and nonoccupant home improvement loans. The first problem should be addressed in the supplementary guidelines, and the second requires a revision to the regulation. The final suggestion addresses the problem of other aggregation errors. This major accuracy problem should be addressed in the supplementary guidelines and in compliance examinations by a discussion of the types of procedures that are efficient and accurate and those that are not.

An important study finding was that one of the most significant ways in which the quality of mortgage disclosure data could be improved is to revise Regulation C to require depository institutions to maintain a listing of the loans included in the disclosure statement. An accurate and convenient method for identifying the loans comprising a disclosure statement is a prerequisite to the validation of its contents. The suggested listing of loans should be provided in numerical order by census tract, and data for each loan should include the loan number, census tract type of loan, type of dwelling, property address, and the loan amount. This loan listing is essential to a cost effective examination of the contents of disclosure statements and the lack of such listings is a factor contributing to the inaccuracies in disclosure statements.

Compiling or Comparing Disclosure Statements: As shown in Table 4.3, three problems associated with the compilation or comparison of disclosure statements were identified. The first suggestion is to require institutions to prepare the disclosure statement in a standard format. Only if the formats and contents of disclosure statements are standardized can public citizens, officials, or public interest groups readily compile and meaningfully interpret the disclosure information for the depository institutions in an SMSA. Standardization of even such seemingly small aspects as rounding to the nearest $1,000 can substantially reduce compilation difficulties. The second suggestion is to require all institutions to report on a calendar year basis. This revision will have little impact on banks and three-fourths of the savings and loan associations that currently have fiscal year closures on December 31. The revision would add a small burden to approximately one-fourth of the savings and loans associations with fiscal closures other than December 31, but the benefits derived from having common basis for comparison and interpretation appear to outweigh the small added burden. The third suggestion is that in granting exemptions to states, the standard formats and contents specified in Regulation be required. This would eliminate the existing problem in which the dissimilarities between state and Federal disclosure statements make compilation onerous and interpretation impossible.

A more detailed discussion of these and other revisions is contained in a companion report, "Revisions to Regulation C".[3]

4.3.3 Examination Procedures to Assess the Accuracy of Home Mortgage Disclosure Act Data

The study findings on the levels of geocoding and aggregation accuracy being achieved by depository institutions indicate the need to implement improved and expanded examination procedures to assess the accuracy of the disclosure data. Procedures to accomplish this purpose were developed during the study, and these are presented in the companion report, "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements."[12]

The study report suggests procedures which can be used during compliance examinations to assess the accuracy with which institutions geocode property addresses to census tracts and the accuracy with which loan information is aggregated into census tract lines on the disclosure statements.

The suggested geocoding procedures provide a means by which regulatory examiners can either "spot check the accuracy of geocoding or perform an examination that permits statistically valid statements to be made regarding the level of accuracy achieved by the institution. These suggested procedures also include provisions whereby the instituion' geocoding methods would be reviewed and suggestions would be made, where appropriate, to replace poor methods and geocoding tools with better ones.

A second study report assesses the methods currently being used by depository institutions in geocoding residential property addresses to census tracts and suggests methods for improvements. This report "Methods to Improve Geocoding Accuracy"[13] discusses the major problems found in the geocoding processes studied during the accuracy analysis. The suggestions made in this report can be used to assist examiners in reviewing the geocoding methods used by depository institutions.

A second set of examination procedures are suggested for assessing the accuracy with which depository institutions aggregate mortgage loan data into their disclosure statements. These suggested examination procedures were derived from the methods that were developed and used to collect and analyze data during the aggregation accuracy analysis. The data required to assess aggregation accuracy during a compliance examination include the institution's disclosure statement; a listing of loans in the disclosure statement that includes for each loan, the census tract, loan number, type of loan, type of dwelling; and "ground truth" data from the manual or automated loan files. Essentially, the suggested procedures prescribe methods by which examiners can randomly select a sample of census tract lines from the disclosure statement, reconstruct the appropriate data for these, and identify errors made by the institution. Through the use of these procedures the accuracy of mortgage disclosure data can be assessed and, where appropriate, raised to a level wherein the data accurately reflect the lending pattern of the institutions.

The suggested procedures require a more extensive examination than is currently employed, and adoption of these procedures will increase the cost of compliance examinations.

Implementation of these suggested examination procedures will impose a substantial added burden upon the regulatory agencies. An estimate was made of the amount of compliance time, in person years, that would be required to perform the suggested examination procedures. For purposes of the estimate, it was assumed that 5,000 institutions are to be examined annually, that statistically valid geocoding audit procedures would be employed, and that the average time required for an examiner to geocode a loans is 3 minutes. Given these assumptions, it was estimated that approximately 10 person years of effort would be required to perform the geocoding portion of the examination procedure. Additional effort is required to prepare the necessary examination procedures for the assessment of geocoding accuracy and to conduct training sessions for examiners.

The examination time required to spot check the accuracy with which a disclosure statement was aggregated was estimated to be between two to six hours per institution. This estimate assumed a loan listing would be available to examiners and that examiners would reaggregate three to five census tract lines from the disclosure statement. (If the loan listing is not available, eight to twenty-four additional hours would be necessary to have the institution prepare the loan listing.) Assuming an average of four hours per each of 5,000 institutions, a total of approximately ten person years would be required. Additional effort would be required to prepare examination procedures and conduct training sessions for examiners.

4.4 CONCLUSION

The primary conclusion of this portion of the study is that a continuation of the Home Mortgage Disclosure Act must be accompanied by the suggested revisions to Regulation the preparation of supplementary guidelines and an assessment of the accuracy of the data during compliance examinations. A substantial additional investment of resources will be required to perform the expanded compliance examinations.

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12. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Act Data from Three Standard Metropolitan Statistical Areas Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements," November, 1979.

13. JRB Associates, Inc. "Analysis of Home Mortgage Disclosure Act Data from Three Standared Metropolitan Statistical Areas -- Methods to Improve Geocoding Accuracy," November, 1979.

ANALYSIS OF HOME MORTGAGE
DISCLOSURE ACT DATA
FROM THREE STANDARD
METROPOLITAN STATISTICAL AREAS

COST OF COMPILING
HOME MORTGAGE DISCLOSURE STATEMENTS

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

TABLE OF CONTENTS

Page

FOREWARD i

SUMMARY iii

1. INTRODUCTION 1-1
    1.1 Purpose 1-1
    1.2 Scope and Methodology 1-1
    1.3 Contents 1-4

2. BUFFALO 2-1

3. SAN DIEGO 3-1

4. CHICAGO 4-1

5. SUMMARY OF FINDINGS 5-1
    5.1 The Costs Incurred In The Preparation Of Disclosure Statements 5-1
    5.2 The Source Of Costs 5-4
    5.3 Estimate Of The Cost Per Loan Associated With HMDA . . . 5-9

REFERENCES R-1

APPENDIX A A-1

LIST OF TABLES AND FIGURES

Page

TABLE S.1: Summary of Average Costs for Sampled Institutions in Buffalo, San Diego, and Chicago iv

TABLE 2.1: Data on Costs Associated with the Preparation of 1977 Disclosure Statements for Sampled Institutions in the Buffalo SMSA 2-2

TABLE 3.1: Data on Costs Associated with the Preparation of 1977 Disclosure Statements for Sampled Institutions in the San Diego SMSA 3-2

TABLE 5.1: Summary of Average Costs Per Sampled Institutions in Buffalo, San Diego, and Chicago 5-2

TABLE 5.2: Ranking of All Sampled Institutions by Cost Per Loan 5-3

TABLE 5.3: Average Costs Per Components of Disclosure Preparation 5-5

TABLE 5.4: Manual and Automated Procedures Used by Sampled Institutions 5-7

FIGURE 4.1: Data on Costs Associated With the Preparation of 1977 Disclosure Statements for Sampled Institutions in the Chicago SMSA 4-2

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants. Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and Demand

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Geocoding Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on industries that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the industries' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of this report is to present data on the costs incurred by sampled depository institutions in the preparation and dissemination of home mortgage disclosure statements pursuant to Regulation C or similar state reporting requirements.

SCOPE AND METHODOLOGY

The cost data contained in this report were obtained from questionnaires sent to 44 depository institutions located in three SMSAs: Buffalo, Chicago, and San Diego. The questionnaire requested data on the operational costs associated with disclosure statement preparation incurred by the 44 institutions. Of the 44 institutions studied, eight were located in Buffalo, ten were located in San Diego, and 26 in Chicago. The sample institutions were selected randomly for purposes of the Accuracy Phase of this study. Consequently, the sample does not provide a valid statistical basis for extrapolating the cost findings to the entire population of institutions in the three SMSAs or elsewhere. The findings of this study do, however, indicate the range of costs incurred by the 44 depository institutions in the preparation of their 1977 disclosure statements. This cost range does provide a useful indicator of the burden imposed on industry by disclosure reporting.

The cost data provided in each questionnaire were reviewed by JRB and discussed with personnel from each institution during on-site visits. These verified cost data provided the basis for this report. Adjustments to the data initially submitted on the questionnaire were necessary for approximately 25 percent of the sampled institutions. These adjustments were undertaken mainly to isolate costs associated with preparation of the disclosure statement for the particular SMSA under study from those of several SMSAs; and, to estimate the costs associated with the preparation of the portion of state reports comparable to the disclosure statement required under Regulation C.

FINDINGS

The results of the study indicate significant differences in cost associated with disclosure statement preparation among the three SMSAs. Table S.1 shows that the average cost per institution incurred by sampled institutions in the preparation of the 1977 Federal or state disclosure statement was $4,167 in Buffalo, $2,767 in San Diego, and $1,390 in Chicago. The average cost per loan incurred by institutions in the study was $2.09 in Buffalo, $0.99 in San Diego, and $1.45 in Chicago.

TABLE S.1: SUMMARY OF AVERAGE COSTS FOR SAMPLED INSTITUTIONS IN BUFFALO, SAN DIEGO, AND CHICAGO

AVERAGE COSTS	BUFFALO SMSA	SAN DIEGO SMSA	CHICAGO SMSA
Average Cost/Institution	$4,167	$2,767	$1,390
Average Cost/Loan	$2.09	$0.99	$1.45

The cost per loan incurred by these 44 institutions ranged from a low of $0.21 to a high of $13.73. The data indicate that 80 percent of the 44 institutions (i.e., 35 of 44) incurred costs per loan of $3.01 or less. Based on the findings of the cost study and the insights obtained in over two years of research, several conclusions were reached. They are:

1. The 44 study institutions incurred an average cost per loan of $1.42 and a median cost per loan of $1.63.

[illegible] data on the costs incurred by
[illegible] ration and dissemination of dis-
[illegible] state reporting requirements.

[illegible] were obtained through analysis of the
[illegible] of sampled institutions in three
[illegible]

[illegible] data were selected using procedures developed
[illegible] study. These procedures are outlined
[illegible] titution in the sample received a questionnaire
[illegible] return it to the Federal Home Loan Bank
[illegible] urance Corporation, as appropriate. The
[illegible] tion on the operational costs associated with
[illegible]. A copy of this questionnaire is included
[illegible] A.

[illegible] tutions in the three SMSAs were asked to identify
[illegible] ated with the preparation of their 1977 disclosure
[illegible] in the following components:

[illegible], including management, administrative, and
[illegible] sources

[illegible] data processing and other costs, including
[illegible] external service bureau processing, posters,
[illegible] oding materials

[illegible] tion, including printing and copying costs,
expenses, and distribution costs.

The cost data contained on the questionnaire were analyzed by the JRB staff. Any inconsistencies or omissions on the questionnaires were reviewed with staff members of the subject institution during on-site visits conducted as part of Phase II of the study. Data on the number of loans in the disclosure statement was obtained from loan rosters supplied by depository institution personnel. This data, along with the final revised cost information, was used as the basis of this report.

Two factors require consideration in interpreting the cost data obtained from the 44 depository institutions sampled in this study. First, preparation of a disclosure statement by a depository institution is typically just one part of a much larger process involving many activities, reports, and files. For this reason, the precise costs associated with preparation of the disclosure statement are seldom examined or estimated. Thus, data on the exact cost of disclosure statement preparation were not available and had to be derived. The second factor is that cost data were derived and supplied by depository institution personnel. JRB verified that the cost estimates provided by the institution were for the appropriate year, SMSA, and disclosure statement, and confirmed the basis for the estimates of the various cost components. In most cases, however, the institution estimates of cost components could not be independently verified, and thus, all uncertainties associated with the data could not be eliminated.

A major problem involved isolating the costs associated with the preparation of the 1977 disclosure statement. This was not easily accomplished, and the depository institutions are to be commended for their participation in this difficult effort. Some depository institutions that prepared disclosure statements simultaneously for several Standard Metropolitan Statistical Areas (SMSAs), for example, only had reliable data on the aggregate costs for preparation of the combined set of disclosure statements. In such cases, the costs for single SMSAs relevant to this study had to be estimated on a pro-rata basis derived from the relative percentage of loans in the particular SMSA under study.

A second problem involved the 23 depository institutions in the sample preparing state disclosure statements in lieu of the Federal disclosure statement. Preparing cost estimates for these institutions was difficult because the state reporting requirements differ significantly from those of the

Federal requirements. In New York, for example, mortgage disclosure information was included as Appendix 9 of the Banking Department's Supervisory Procedure G107. In California, state chartered savings and loan associations were required to report loan originations and loan denials under the provisions of the California Fair Lending Act. In Illinois, state chartered commercial banks and savings and loan associations were originally required to report applications and disbursements--aggregated by both census tract and zip code--under the provisions of the Financial Institutions Disclosure Act The Illinois Supreme Court later ruled this requirement unconstitutional with the result that subsequent disclosure statements were prepared in conformance with Regulation C. Because of these differences a valid basis for comparison between Federal and state reports was established only after the costs associated with preparation of the portion of the state disclosure statement comparable to the Federal disclosure statement was isolated from the total cost.

Other issues dealt with the method of report preparation.[2] Some institutions prepare disclosure data continuously, while others prepare these data retrospectively at the end of the fiscal year Geocoding addresses to census tracts, a major component of the overall cost of disclosure statements, is done retrospectively by some institutions, and continuously by others. In some institutions, geocoding is performed continuously by appraisers involved in the process of appraising a property. In other institutions, geocoding is performed for the institution by a service bureau using automated means. Isolating the labor costs of such incremental activity as geocoding by appraisers involved the estimation of hourly salary rates, the number of activities performed (e.g., the number of addresses geocoded), and the rate at which the activities were performed. JRB's prior familiarity with these activities was helpful in reviewing and verifying the various cost components associated with them.

The basis for the cost estimates were reviewed with personnel from the 44 sampled depository institutions during the on-site visit. In each case, it was verified that the estimates based upon the costs associated with preparation of the 1977 disclosure statement or state counterpart, and that the cost data pertained only to the particular SMSA being considered in the study. The methods by which the disclosure statement was prepared and the component parts of the estimated cost were also reviewed with personnel from each institution during the visit. Adjustments in the initial estimated cost reported on the questionnaires were made in approximately 25 percent of the institutions. The majority of these adjustments were necessitated by the need to isolate the costs associated with the particular SMSA under study, or to develop a suitable basis for comparing the costs associated with preparation of Federal disclosure statements and those of a larger state disclosure statement.

In spite of these extensive verification efforts, the cost estimates for a few of the institutions are undoubtedly somewhat higher or lower than their actual cost. The overall study indicates, however, that the cost estimates from most institutions are sufficiently consistent to allow conclusions to be drawn based on the likely range of preparation costs as reflected in the cost per loan incurred by various institutions.

1.3 CONTENTS

Each of the following three chapters presents a brief narrative describing the cost components associated with disclosure statement preparation for the sampled SMSAs, as well as specific cost data for participating institutions. In the cost tables, each institution is identified by code rather than name, to ensure confidentiality. The final chapter presents conclusions and observations based on the analysis of cost data from the 44 financial institutions participating in the study.

2.

CHAPTER 2

BUFFALO

Cost information was obtained for eight depository institutions located in the Buffalo SMSA. These included two savings and loan associations, four mutual savings banks, and two commercial banks. Five of the eight sampled institutions in Buffalo prepared disclosure statements under the provisions of the State Banking Department's Supervisory Procedure G107. Four of the sampled institutions utilized a service bureau, Urban Data Systems, to perform geocoding associated with the preparation of their disclosure statements.

The cost incurred by the eight depository institutions in the preparation of their 1977 disclosure statements are summarized in Table 2.1. The five institutions that prepared state disclosure statements are noted with a superscript on the institution code. The three components of cost and the total costs are shown. The average cost per loan was computed by dividing the number of loans included on the 1977 disclosure statement into the total cost. The cost per loan varied from $0.71 per loan to $3.89 per loan, and the average cost per loan was $2.09.

TABLE 2.1: DATA ON COSTS ASSOCIATED WITH THE PREPARATION OF 1977 DISCLOSURE STATEMENTS FOR SAMPLED INSTITUTIONS IN THE BUFFALO SMSA

	COSTS IN DOLLARS					
INSTITUTION CODE	LABOR	GEOCODING TOOLS AND DATA PROCESSING	REPRO-DUCTION	TOTAL COSTS	NUMBER OF LOANS	COST PER LOAN ($)
BUFF-1	613	--	10	623	160	3.89
BUFF-2^S	691	6000	300	6991	3865	1.80
BUFF-3^S	4908	1600	25	6533	3457	1.89
BUFF-4	180	525	150	855	1202	.71
BUFF-5^S	2360	5886	36	8282	2752	3.01
BUFF-6^S	675	6600	--	7275	2501	2.91
BUFF-7^S	654	1375	--	2029	1043	1.95
BUFF-8	879	--	65	744	966	.77

S = Institution files disclosure statement under state disclosure law rather than Regulation C

CHAPTER 3

SAN DIEGO

Cost information was obtained for ten depository institutions located in the San Diego SMSA. These included nine savings and loan associations and one commercial bank. Five of the ten sampled institutions in San Diego are state chartered and prepared their disclosure statements in compliance with the provisions of the California Fair Housing Act. The California Act requires the subject institutions to supply the state with monthly data on mortgage loans in the form of a magnetic tape or computer cards. The state uses these data to produce the disclosure statement (i.e., Fair Lending Report).

The costs incurred by the ten depository institutions in the preparation of their 1977 disclosure statements are summarized in Table 3.1. The five institutions that prepared state disclosure statements are noted with a superscript on the institution code. The three components of cost and the total costs are shown. The average cost per loan was computed by dividing the number of loans included on the 1977 disclosure statement into the total cost. The cost per loan for institutions in San Diego varied from $0.38 per loan to $7.79 per loan, and the average cost per loan was $0.99.

Institution S.C-10, which incurred the highest cost per loan, was a commercial bank that included only 47 loans in its 1977 disclosure statement.

Although the State of California generated the State Fair Lending Report for five of the institutions in the sample, the average cost per loan for these institutions was higher than the average cost per loan for the other five sampled institutions. The costs incurred by the state in preparing the statement were not considered in this calculation. The average cost per loan for the five state chartered institutions was $1.34; whereas, the average cost per loan for the five institutions generating their own disclosure statement was $0.78 per

TABLE 3.1: DATA ON COSTS ASSOCIATED WITH THE PREPARATION OF 1977 DISCLOSURE STATEMENTS FOR SAMPLED INSTITUTIONS IN THE SAN DIEGO SMSA

INSTITUTION CODE	COSTS IN DOLLARS				NUMBER OF LOANS	COST PER LOAN ($)
	LABOR	GEOCODING TOOLS AND DATA PROCESSING	REPRO-DUCTION	TOTAL COSTS		
S.D.-1	3133	1645	—	4778	4637	1.03
S.D.-2	669	390	33	1092	2801	.39
S.D.-3^S	800	275	10	1085	1419	.76
S.D.-4^S	—	800	—	800	2006	.40
S.D.-5	2445	4315	250	7010	8304	.84
S.D.-6^S	357	510	68	935	804	1.16
S.D.-7	670	95	—	765	1980	.39
S.D.-8^S	5040	76	—	5116	2520	2.03
S.D.-9^S	2055	3630	40	5725	3430	1.67
S.D.-10	365	—	1	366	47	7.79

S- Institution files disclosure statement under state disclosure law rather than Regulation C.

loan. Based on these data, therefore, the lower average cost per loan for institutions in the San Diego SMSA than for those in Buffalo cannot be attributed to the generation of the disclosure statement by the state. A more plausible explanation is that the majority of the preparation costs are already incurred in geocoding, maintaining files, and placing the data in machine readable form. The incremental cost, thereafter, to sort the data and produce the disclosure statement is of secondary significance.

CHAPTER 4

CHICAGO

Cost information was obtained for 26 depository institutions located in the Chicago SMSA. These included 13 savings and loan associations and 13 banks. Twelve of the 26 sampled institutions in Chicago originally prepared disclosure statements under the provisions of the Illinois Financial Institutions Disclosure Act. These statements contained applications and disclosure information aggregated by both census tract and zip code for six month periods corresponding to the fiscal year of the reporting institution. Subsequent to a ruling by the Illinois Supreme Court that the state law was unconstitutional, these institutions were required to prepare disclosure statements under the provisions of Regulation C.

The costs incurred by the 26 depository institutions in the preparation of their 1977 disclosure statements are summarized in Table 4.1. The 12 institutions that originally prepared state disclosure statements are noted with a superscript on the institution code. The three components of cost and the total costs are shown. The average cost per loan was computed by dividing the number of loans included on the 1977 disclosure statements into the total cost. The cost per loan varied from $0.21 per loan to $13.73 per loan, and the average cost per loan was $1.45.

FIGURE 4.1: DATA ON COSTS ASSOCIATED WITH THE PREPARATION OF 1977 DISCLOSURE STATEMENTS FOR SAMPLED INSTITUTIONS IN THE CHICAGO SMSA.

INSTITUTION CODE	COSTS IN DOLLARS				NUMBER OF LOANS	COST PER LOAN ($)
	LABOR	GEOCODING TOOLS AND DATA PROCESSING	REPRO-DUCTION	TOTAL COSTS		
CHI.-1	1650	200	--	1850	596	3.11
CHI.-2	1718	16	15	1749	1243	1.41
CHI.-3	92	25	5	122	75	1.63
CHI.-4	3759	955	45	4759	6602	.72
CHI.-5	2000	495	2	2497	817	3.06
CHI.-6^S	425	--	25	450	109	4.13
CHI.-7^S	235	--	--	235	380	.62
CHI.-8^S	121	200	12	333	166	2.01
CHI.-9	303	--	--	303	490	.62
CHI.-10	136	50	50	236	317	.75
CHI.-11	534	--	30	564	1175	.48
CHI.-12	5570	640	--	6210	4623	1.35
CHI.-13	560	150	--	710	296	2.40

FIGURE 4.1 (Continued)

INSTITUTION CODE	COSTS IN DOLLARS				NUMBER OF LOANS	COST PER LOAN ($)
	LABOR	GEOCODING TOOLS AND DATA PROCESSING	REPRO-DUCTION	TOTAL COSTS		
CHI.-14[s]	981	113	4	1098	80	13.73
CHI.-15[s]	11	50	10	77	357	.22
CHI.-16	643	100	10	753	463	1.63
CHI.-17[s]	125	—	5	130	201	.65
CHI.-18[s]	200	50	—	250	282	.89
CHI.-19[s]	1433	480	—	1913	610	3.14
CHI.-20[s]	448	—	10	458	342	1.34
CHI.-21[s]	230	130	25	385	85	4.53
CHI.-22[s]	123	—	20	143	82	1.75
CHI.-23	4700	3100	40	7840	4107	1.91
CHI.-24	66	115	5	386	85	4.54
CHI.-25[s]	34	—	2	36	171	.21
CHI.-26	2541	—	100	2641	1170	2.26

s= Institution files disclosure statement under state disclosure law rather than Regulation C.

CHAPTER 5

SUMMARY OF FINDINGS

Less than 10 percent of the institutions required to report under Regulation C or similar state disclosure laws in the three SMSAs studied were sampled. Furthermore because the sample of institutions was selected for purposes of the accuracy portion of the study, it does not provide a statistical basis for estimating the costs incurred by the full population of institutions in these SMSAs or elsewhere. Nevertheless the study findings showing the range of costs incurred by these 44 institutions do offer important insight into the burden imposed on industry by the Home Mortgage Disclosure Act. These findings also provide insight into the source of the costs incurred by depository institutions in preparing their disclosure statements.

5.1 THE COSTS INCURRED IN THE PREPARATION OF DISCLOSURE STATEMENTS

The average costs for the sampled institutions in the three SMSAs are summarized in Table 5.1 in terms of the cost per institution and the cost per loan in the disclosure statement. The average cost per institution in the three SMSAs ranged from a low of $1,390 in Chicago to a high of $4,167 in Buffalo. The average cost per loan ranged from a low of $0.99 in San Diego to a high of $2.09 in Buffalo. Thus, institutions in Buffalo incurred both the highest cost per institution and the highest cost per loan. Institutions in San Diego were not lowest in cost per institution, but they were lowest in cost per loan.

The costs incurred by depository institutions in the preparation of Federal or state disclosure statements are most meaningfully understood and compared on the basis of the cost per loan included in the disclosure statement Table .2 ranks the 44 sampled institutions in terms of the cost per loan they incurred as calculated by dividing each institution's total cost by the number of loans their disclosure statement. The table also indicates if the institution is a commercial bank, mutual savings bank, or savings and

TABLE 5.1: SUMMARY OF AVERAGE COSTS PER SAMPLED INSTITUTIONS IN BUFFALO, SAN DIEGO, AND CHICAGO

	BUFFALO SMSA	SAN DIEGO SMSA	CHICAGO SMSA
Average Cost/Institution	$4,167	$2,767	$1,390
Average Cost/Loan	$2.09	$0.99	$1.45

TABLE 5.2: RANKING OF ALL SAMPLED INSTITUTIONS BY COST PER LOAN

INSTITUTION CODE	BANK(B) S&L(S) C'ML BANK(C)	STATE(S) FEDERAL (F)	TOTAL COST($)	NUMBER OF LOANS	METHOD USED			PERCENTAGE OF GEOCODING ACCURACY	COST/LOAN($)	RANK
					MORTGAGE LOAN FILE	PREPARATION OF DISCLOSURE STATEMENT	GEOCODING			
CHICAGO - 25	C	S	36	171	M	M	M-4	96	.21	1
CHICAGO - 15	C	S	77	357	A-E	M	M-2	42.5	.22	2
SAN DIEGO - 2	S	F	1,092	2,891	A-E	A-E	M-3	96	.38	3
SAN DIEGO - 7	S	F	763	1,980	A-I	A-I	M-3	87	.39	4
SAN DIEGO - 4	S	S	800	2,009	A-I	A-E	M-3	94	.40	5
CHICAGO - 11	S	F	576	1,193	M	M	M-1	89	.48	6
CHICAGO - 9	S	F	303	490	A-E	M	M-2	59	.62	7
CHICAGO - 7	S	S	235	380	A-E	M	M-2	78	.62	8
CHICAGO - 17	S	S	130	201	M	M	M-4	100	.65	9
BUFFALO - 4	S	F	853	1,202	A-E	A-E	A-1	96	.71	10
CHICAGO - 4	S	F	4,739	6,602	A-I	A-I	A-2	100	.72	11
CHICAGO - 10	S	F	234	317	A-E	A-E	A-2	98	.74	12
SAN DIEGO - 3	S	S	1,083	1,419	A-I	A-E	M-3	96	.76	13
BUFFALO - 8	S	F	744	968	M	M	M-5	94	.77	14
SAN DIEGO - 5	S	F	7,010	8,384	A-I	A-I	M-3	93	.84	15
CHICAGO - 18	C	S	250	281	A	A-E	M-4	33	.89	16
SAN DIEGO - 1	S	F	4,778	4,347	A-I	A-I	M-6	91	1.10	17
SAN DIEGO - 6	S	S	935	806	M	A-E	M-3	90	1.16	18
CHICAGO - 20	C	S	458	342	M	M	M-7	90	1.34	19
CHICAGO - 12	S	F	6,210	4,623	A-I	A-I	M-4	92	1.34	20
CHICAGO - 2	S	F	1,749	1,243	A-E	M	M-6	94	1.41	21
CHICAGO - 16	S	F	743	483	M	M	M-2	84	1.54	22
CHICAGO - 3	C	F	122	75	A-E	M	M-2	52	1.63	23
SAN DIEGO - 9	S	S	5,728	3,430	A-I	A-I	M-3	98	1.67	24
CHICAGO - 22	C	S	143	82	M	M	M-6	92	1.75	25
BUFFALO - 2	S	S	6,991	3,865	A-I	A-I	A-2	97	1.80	26
BUFFALO - 3	S	S	6,533	3,457	A-E	A-E	A-1	92	1.89	27
CHICAGO - 23	S	F	7,840	4,107	A-I	A-I	A-2	90	1.91	28
BUFFALO - 7	S	S	2,029	1,043	A-E	A-E	A-1	98	1.95	29
CHICAGO - 8	S	S	333	166	A	A	M-3	69	2.01	30
SAN DIEGO - 8	S	S	5,116	2,320	A-I	A-I	M-3	85	2.21	31
CHICAGO - 26	S	F	2,641	1,170	A-E	A-E	M-6	94	2.26	32
CHICAGO - 13	C	F	710	296	A-E	M	M-6	98	2.40	33
BUFFALO - 6	S	S	7,273	2,501	A-E	A-E	A-1	90	2.91	34
BUFFALO - 5	C	S	8,282	2,752	A-I	A-E	A-1	100	3.01	35
CHICAGO - 5	S	F	2,497	817	A-I	A-I	M-9	93	3.06	36
CHICAGO - 1	S	F	1,830	588	A-E	A-E	M-6	95	3.11	37
CHICAGO - 19	C	S	1,913	610	A-I	A-I	M-8	73	3.14	38
BUFFALO - 1	C	F	623	160	M	M	M-10	97	3.89	39
CHICAGO - 6	C	S	438	106	M	M	M-1	66	4.13	40
CHICAGO - 21	C	S	283	65	A-E	M	M-2	61	4.35	41
CHICAGO - 24	C	F	388	85	A	M	M-7	89.1	4.56	42
SAN DIEGO - 10	C	F	366	47	M	M	M-2	98	7.79	43
CHICAGO - 14	C	S	1,098	80	A-E	M	M-7	33	13.73	44

METHOD USED CODES:

Mortgage Loan File:
Preparation of Disclosure Statement:

A-I Automated Using Internal Sources
A-E Automated Using External Sources

GEOCODING:
A-1 Automated Using Internal Service Bureau
A-2 Automated and Manual for Non-Matches
M-1 Manual Using Sims ACS
M-2 Manual Using CTM
M-3 Manual Using TBM
M-4 Manual Using 348
M-5 Manual by Appraiser
M-6 Manual Using Sims ACS & CTM
M-7 Manual Using CTM & 348
M-8 Manual Using CTM & Street Map
M-9 Manual Using Sims ACS, CTM, and 348
M-10 Manual by Loan Officer

and loan association; is Federally or state chartered; its total cost incurred in preparing the disclosure statement; the number of loans on the disclosure statement; whether the mortgaged loan files, method of report preparation, and geocoding method is manual or automated; and the percent of geocoding accuracy achieved. These data provide the basis for analysis of the source of costs later in the chapter.

As shown in Table 5.2, the cost per loan incurred by these 44 institutions ranged from a low of $0.21 to a high of $13.73. More importantly, the data show that 80 percent of the institutions (i.e., 35 of 44) incurred costs of $3.01 or less, and that 82 percent of the institutions (i.e., 36 of 44) incurred costs per loan between $.40 and $4.53. The median cost per loan incurred by the 44 institutions was $1.63 and the average cost per loan was $1.42.

5.2 THE SOURCE OF COSTS

Institutions vary dramatically in their methods of report production. Consequently, the costs incurred by individual institutions differ dramatically. Nevertheless, all institutions subject to disclosure reporting will encounter at least some costs in each of the following categories:

- Geocoding addresses to census tracts
- Entry of data into logs, rosters, or files
- Generation of the disclosure statement
- Reproducing disclosure statements.

Direct labor is the major cost component for institutions that prepare their statement entirely by manual means. Conversely, data processing is the major cost component for institutions that largely use internal or external (i.e., service bureau) automated means to prepare their statement. Table 5.3 summarizes the average costs associated with three components of disclosure statement preparation by institutions in each of the three SMSAs. The average total cost per institution in an SMSA was calculated by summing the costs of all the sampled institutions and dividing this sum by the number of sampled institutions in each SMSA. The costs associated with the three

TABLE 5.3: AVERAGE COSTS PER COMPONENTS OF DISCLOSURE PREPARATION

	BUFFALO SMSA		SAN DIEGO SMSA		CHICAGO SMSA	
	$	%	$	%	$	%
Average Labor Costs/INST	1,363	32.7	1,549	56	1,008	79.7
Average Costs Associated with Automated Data Processing and other costs/INST	2,734	65.6	1,176	42.5	267	19.2
Average Reproduction Costs/INST	70	1.7	42	1.5	15	1.1
TOTAL	4,167	100	2,767	100	1,390	100

components were determined in a similar manner. As shown in Table 5.3, the costs attributable to labor are dominant for institutions in the Chicago SMSA (i.e. 79.7 percent) whereas, the costs attributable to automatic data processing and other costs are dominant for institutions in the Buffalo SMSA (i.e., 65.6 percent) This reflects the extensive use of automated means, (e.g., geocoding by an automated service bureau) by institutions in Buffalo, in contrast to the greater use of manual means in Chicago. The basis for the costs for institutions in San Diego is more evenly divided between labor, automated data processing, and other costs.

Analysis of the data contained in Table 5.2 offers further insight into the source of costs incurred by the 44 depository institutions in the study. As discussed in Chapter 1, some variability in the cost is due to imprecision in the estimation techniques employed The study team concluded that imprecise cost estimation techniques probably explain the data for the institutions with the two highest and the two lowest cost per loan estimates. The data for the other 40 institutions confirm this conclusion by indicating that a cost per loan of $0.22 is unreasonably low and a cost per loan greater than approximately $7.79 is unreasonably high.

The various methods and procedures used by depository institutions to prepare their disclosure statements were analyzed to determine whether certain methods yield lower costs per loan. The analysis included a comparison of automated and manual techniques for geocoding, maintenance of mortgage files, processing to prepare disclosure data, and disclosure statement preparation. Depository institutions were found to use a variety of methods and procedures to prepare their disclosure statements. In fact, the study found no two institutions with identical procedures for geocoding, maintaining files, and aggregating data into the disclosure statements.

The number of institutions using manual and automated methods for each of the three primary aspects involved in the preparation of their disclosure statement is shown in Table 5.4.

TABLE 5.4: MANUAL AND AUTOMATED PROCEDURES USED BY SAMPLED INSTITUTIONS

SMSA	NUMBER OF INSTITUTIONS					
	Mortgage Loan Files		Preparation of Disclosure Statement		Geocoding Method	
	Manual	Automated	Manual	Automated	Manual	Automated
BUFFALO	2	6	2	6	2	6
SAN DIEGO	2	8	1	8	10	0
CHICAGO	7	19	16	10	22	4
TOTAL	11	33	19	24	34	10

Three fourths of the 44 institutions (i.e., 33 of 44) had automated mortgage loan files but approximately one half of the institutions (i.e., 24 of 44) used automation to prepare their disclosure statements. Eight institutions with automated mortgage loan files used manual means to prepare their dislosure statement. Approximately three fourths of the 44 institutions (i.e., 34 of 44) used manual geocoding techniques and one fourth used automated techniques.

Nineteen of the twenty institutions that included more than 1,000 loans in their disclosure statement employed automated mortgage loan files. These consisted of six institutions in the Buffalo SMSA, eight institutions in the San Diego SMSA, and five institutions in the Chicago SMSA. These 19 institutions accounted for 88 percent of the total number of loans and 84 percent of the total costs for the institutions studied in the three SMSAs. The cost per loan incurred by these institutions using automated techniques in the Buffalo, San Diego, and Chicago SMSAs was \$2.16, \$0.97 and \$1.31, respectively. The average cost per loan for the 19 institutions was \$1.36.

It is evident from these data that these institutions dominate estimates of the average cost per loan in the three SMSAs. It is also evident that it is the ability of depository institutions with large quantities of mortgage loans to capitalize on their pre-existing automated loan files developed for other operational purposes that permits disclosure statements to be prepared at a fraction of the cost per loan that would otherwise be required. Thus the overall average cost per loan of $1.42 is largely determined by the 19 institutions that were able to use pre-existing automated means to process large numbers of mortgage loans.

Thirteen institutions in the study included between 200 and 1000 loans in their disclosure statements. These consisted of 11 institutions in the Chicago SMSA and one in each of the San Diego and Buffalo SMSAs. Eight of these institutions, all in Chicago, employed an automated mortgage loan file. The average cost per loan for these eight institutions was $2.11. The other five institutions employed manual mortgage loan files, and these institutions incurred a cost per loan of $1.09. The average cost per loan for all 13 institutions was $1.68 These findings suggest that, for institutions with medium quantities of loans, (i.e., 200-1000 loans), automation tends to increase the cost per loan and the cost per loan is higher than for institutions with larger quantities of loans.

Eleven institutions in the study included less than 200 loans in their disclosure statement. These consisted of nine institutions in the Chicago SMSA, and one in each of the San Diego and Buffalo SMSAs. Six of these institutions all in Chicago, employed automated mortgage loan files. The average cost per loan for these six institutions was $2.84. The other five institutions employed manual mortgage loan files, and these institutions incurred a cost per loan of $4.56. The average cost per loan for all 11 institutions was $3.67. These findings suggest that for institutions with small quantities of loans, (i.e., less than 200 loans), automation tends to increase the cost per loan and that, overall, the cost per loan is higher than for institutions with large quantities of loans.

Analysis of the data indicates that no other procedural or methodological issues serve to explain the differences in cost per loan associated with HMDA. Other variables, such as the method of geocoding, were examined, but these yielded no significant correlations with cost. The conclusion was reached that, except for the use of automation for a large number of loans, other differences in the cost associated with the preparation of the disclosure statement are primarily explained by the efficiency with which procedures are used, and not the type of procedures employed.

Interestingly, the data did indicate that banks incurred a higher cost per loan than did savings and loan associations. The 20 sampled banks incurred an average cost per loan of $2.84; whereas, the 24 sampled savings and loan associations incurred an average cost per loan of $1.10. Sixteen of the twenty banks in the sample fell into the bottom half of the cost per loan ranking, and twelve of the thirteen institutions with the highest cost per loan were banks.

The 20 banks included an average of only 714 loans in their disclosure statements; whereas, the 24 savings and loan associations included an average of 2,147 loans in their disclosure statements To determine whether the smaller volume of loans was the source of the higher cost per loan for banks, the average cost per loan for banks and savings and loans with fewer than 1,000 loans was calculated and compared with the average cost per loan for banks and savings and loans with more than 1,000 loans. Banks with fewer than 1,000 loans incurred an average cost per loan of $3.64; whereas, banks with more than 1,000 loans incurred average cost per loan of $2 47 Savings and loan associations with fewer than 1,000 loans incurred an overall cost per loan of $1.25; whereas, associations with more than 000 loans incurred an average cost per loan of $1.08. These findings indicate that the higher costs per loan incurred by sampled banks are due largely to factors other than the number of loans in the disclosure statement. The main factor appears to be the efficiency with which methods and procedures are employed rather than the type of method or procedure itself.

5.3 ESTIMATE OF THE COST PER LOAN ASSOCIATED WITH HMDA

Based on the findings of the cost study and the insights obtained in over two years of research, several conclusions were reached. These are:

1. The 44 institutions incurred an average cost per loan of $1.42 and a median cost per loan of $1.63.

2. Institutions using reasonably efficient procedures incurred costs per loan in the range of one dollar to four dollars.

3. The 19 study institutions with automated mortgage loan files and with more than 1,000 loans in their disclosure statement incurred a cost per loan of $1.36, and their costs accounted for 88 percent of the loans and 84 percent of the cost.

4. The 13 study institutions with between 200 and 1,000 loans in their disclosure statement incurred a cost per loan of $1.68.

5. The 11 study institutions with less than 200 loans in their disclosure statement incurred a cost per loan of $3.67.

6. Automation is essential to enable institutions with more than 1,000 loans in their disclosure statement to achieve a low cost per loan, but it is not essential for institutions with fewer than 1,000 loans.

7. The cost per loan incurred by institutions with fewer than 1,000 loans is more a function of the efficiency with which a procedure is employed than the type of procedure itself.

8. Institutions with fewer than 200 loans in their disclosure statement incur a greater cost per loan than do institutions with significantly more than 200 loans in their disclosure statement.

9. Most banks incur a greater than average cost per loan because of the smaller number of loans in their disclosure statement and their less efficient methods.

REFERENCES

1. JRB Associates, Inc., "Analysis of Home Mortgage Disclosure Data from Three Standard Metropolitan Statistical Areas - Accuracy Results," draft report, November 1979.

2. JRB Associates Inc., "Analysis of Home Mortgage Disclosure Data from Three Standard Metropolitan Statistical Areas - Methods to Improve Geocoding Accuracy," November 1979.

APPENDIX A

FHLBB AND FDIC COST AND PROCEDURES QUESTIONNAIRE

pose: The Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation are jointly conducting a study to determine the procedures and costs associated with preparation of disclosure reports required under the Home Mortgage Disclosure Act. This study is intended to provide information to enable the FHLBB and the FDIC to assess methods and costs and to make improvements, where possible. The information provided in the study will be treated as confidential. It will be used only for statistical purposes and not released outside of the study.

TITUTION: ______________________________

RESS: ______________________________

SON COMPLETING QUESTIONNAIRE: ______________________________

E: ______________________________

1. Responsibility: In the table below, please indicate the individual with overall responsibility for preparation of the HMDA report and also those individuals responsible, as applicable, for specific portions or activities.

Area of Responsibility / Staff	Name	Title or Department	Phone
Overall			
Originations, Part A			
Purchases, Part B			
Home Improvement			
Geocoding			

2. Methods of Preparation: Please describe briefly the methods and/or steps by which the HMDA report is prepared. We are interested in the types of files used, whether the process is manual, automated, or both, and whether you only perform geocoding continuously or retrospectively when the report is prepared. If you have written procedures and wish to furnish them, please do so and skip this step.

Methods: ____________________

3. **Automation:** Please indicate the extent to which you use automation in processing the HMDA report.

Activity	Automated		Source of Automation		If external service bureau is used, please name
	Yes	No	Internal	Service Bureaus	
Mortgage Loan Files					
HMDA Report Files					
Processing HMDA Report					
Geocoding to Census Tract					

4. **Geocoding to Census Tracts:** Please indicate the methods and tools used in geocoding loans to census tracts for the HMDA reports.

Tools	Used		If used, please indicate which one
	Yes	No	
Census Tract Maps			
Other maps			
Address coding guide			
Automated geocoding program			
Other (Specify)			

a. How many people are involved in the geocoding process? ____________

b. How are they trained to perform geocoding? ____________

____

c. Which years (e.g., 1970?) census tracts were used for geocoding? ____________

d. How do you verify the accuracy of geocoding? ____________

____

e. What is the average time required to geocode a loan to census tract? ____________

____

5. Problems and Improvements: Please indicate the areas in which you have the most problems in the preparation of the HMDA report and/or areas in which you feel improvements can be made.

Definitions and Terminology in the Act: ______________________________

____

____

____

Geocoding Tools and Methods: ______________________________

____

____

____

____

Categories of Loans to be Included: ______________________________

____

____

____

____

Other (Please specify): ______________________________

____

____

____

____

____

6. COSTS INCURRED IN THE PREPARATION OF THE HMDA REPORT: **Please complete the chart below, estimating the resources expended by your institution in the preparation of your latest HMDA report.**

Labor Category	No. of Hours	Average Rate Per Hour	Total Cost ($)
Management/ Administrative			
Clerical			
Other (Specify)			
Other Costs			
Direct Costs for Internal Data Processing (Hardware/ Software)			
Service Bureau Costs, If Used			
Reproduction, Supplies, Postage, etc.			
Total Cost of Report Preparation			

Report preparation Activity	Cost ($)	Percentage of Cost
Data Gathering		
Geocoding Loans to Census Tract		
Preparation and Maintenance of Files		
Processing to Prepare Report		
Total		100%

7. **Uses of the HMDA Report**: Please indicate the information below concerning the uses of the HMDA report.

   a. How many requests were made for the HMDA report in the past year? ________________. By whom? ________________________________
   ____
   ____
   ____

   b. Do you provide copying facilities for the HMDA report?
   Yes__________ No__________.

   c. Do you charge for copying? Yes__________ No__________.

   d. Do you feel that the report is useful? Yes__________ No__________.

   e. Could it be made more useful? If so, how?____________________
   ____
   ____
   ____

   f. How do you make depositors aware of the availability of the HMDA report? ________________________________
   ____
   ____
   ____

   g. Where is the HMDA report available? ____________________
   ____
   ____
   ____

   h. Do you use census tract information for any purpose beside the preparation of the HMDA report? ____________________
   ____
   ____
   ____

ANALYSIS OF HOME MORTGAGE DISCLOSURE ACT DATA FROM THREE STANDARD METROPOLITAN STATISTICAL AREAS

UTILITY OF THE HOME MORTGAGE DISCLOSURE ACT

For

Federal Home Loan Bank Board
and
Federal Deposit Insurance Corporation

Submitted by

JRB Associates, Inc.
8400 Westpark Drive
McLean, Virginia 22102

November 1979

FHLBB Contract 677040
JRB Project 2-800-04-118

[illegible]

TABLE OF CONTENTS

PAGE

PREFACE

SUMMARY [illegible]

[illegible] INTRODUCTION [illegible]

[illegible] Purpose [illegible]

[illegible] Scope [illegible]

[illegible] Utility of the Current Form of Disclosure Data [illegible]

[illegible] Observations on the Utility of Alternative Forms of Disclosure Data [illegible]

[illegible] Methodology [illegible]

[illegible] Contents of this Report [illegible]

[illegible] UTILITY OF THE HOME MORTGAGE DISCLOSURE ACT [illegible]

[illegible] The Potential Usefulness [illegible]

[illegible] The Requirements [illegible]

[illegible] Potential Usefulness of Home Mortgage Disclosure Data [illegible]

[illegible] Limitations of Potential Usefulness [illegible]

[illegible] Actual Usefulness [illegible]

[illegible] Use by Individual Citizens and Local Public Officials [illegible]

[illegible] Use and Perceptions of Community and Public Interest Groups [illegible]

[illegible] Use and Perceptions of the Regulatory Agencies [illegible]

[illegible] Use and Perceptions of Depository Institutions [illegible]

[illegible] [illegible] [illegible]

[illegible] [illegible] [illegible]

[illegible] Conclusions on Actual Usefulness [illegible]

[illegible] Cost of the Home Mortgage Disclosure Act [illegible]

[illegible] The Cost Incurred by Depository Institutions. [illegible]

[illegible] EXAMINATION OF THE UTILITY OF ALTERNATIVE FORMS OF THE HOME MORTGAGE DISCLOSURE ACT [illegible]

[illegible] Changes in the Content of Reporting. [illegible]

[illegible] Addition of [illegible] Data [illegible]

[illegible] Addition of [illegible] Data [illegible]

[illegible]

TABLE OF CONTENTS (Cont'd)

Page

3.1.3 Addition of Data on Aggregate Portfolio 3-9
3.1.4 Addition of Other Types of Loans 3-11
3.2 Changes in the Scope of Reporting Requirements 3-12
3.2.1 Non-SMSA Reporting 3-12
3.2.2 Institution Size 3-14
3.3 Conclusions on Alternative Forms 3-15
REFERENCE R-1
APPENDIX A A-1

LIST OF TABLES

Page

Table 2.1: Prohibited Bases Contained in Antidiscrimination Acts and Regulations 2-4

Table 2.2: Number of Requests by the Public for Mortgage Disclosure Statements 2-10

Table 2.3: Geocoding Accuracy for all Institutions in Buffalo, Chicago, and San Diego 2-16

Table 2.4: Geocoding Accuracy 2-17

Table 2.5: Percentage of Aggregation Errors by Institutions in Three SMSAs 2-20

Table 2.6: Solutions to Problems Assoicated with Non-Standard Formats and State Exemptions 2-22

Table 2.7: Ranking of all Sampled Institutions by Cost per Loan . . . 2-26

Table 2.8: Methods for Preparing Disclosure Statements. 2-27

Table 2.9: Examination Time Required to Assess the Accuracy of Geocoding 2-31

Table 3.1: Percentage of Mortgage Lending by Depository Institutions 3-14

Table A.1: Number of Mortgage Loans and Home Improvement Loans in 1977 . . . . A-3

FOREWORD

This report was prepared by JRB Associates, Inc., McLean, Virginia, for the Federal Home Loan Bank Board (FHLBB) and the Federal Deposit Insurance Corporation (FDIC under FHLBB study contract 677040. The purpose of the study is to analyze the Home Mortgage Disclosure Act and Regulation C in order to determine the accuracy with which depository institutions are compiling the mortgage loan disclosure statements, identify the relative fraction of mortgage loans made by institutions subject to the Act versus those made by other lenders, and to prepare a series of reports addressing a variety of issues such as the cost of compliance and ways to improve regulations, enforcement, geocoding, and the usefulness of the disclosure information.

The study began on September 30, 1977, and was completed in November, 1979. The analysis is based upon information collected in three Standard Metropolitan Statistical Areas - San Diego, California; Buffalo, New York; and Chicago, Illinois. The study is divided into four phases.

- Phase 1 Develop Computer Systems, and Collect and Process Disclosure Statements
- Phase 2 Accuracy
- Phase 3 Completeness
- Phase 4 Management Reports

Phase 1 has been conducted by a companion contractor, Resource Consultants, Inc., Phoenix, Arizona. JRB Associates has conducted Phases 2, 3, and 4. This report is one of twelve reports prepared under Phases 2, 3, and 4 of the study. These reports are:

Phase 2 Accuracy

- Accuracy of Disclosure Statement Preparation
- Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements

Phase 3 Completeness, Double Counting, and [illegible]

- Completeness
- Double Counting
- A Conceptual Framework to Analyze Discrimination and Redlining in Neighborhood Home Mortgage Lending Patterns*

Phase 4 Management Reports

- Compliance Analysis
- The Cost of Compiling Home Mortgage Disclosure Statements
- Revisions to Regulation C
- Utility of the Home Mortgage Disclosure Act Data
- Enforcement of the Home Mortgage Disclosure Act
- Methods to Improve Recording Accuracy
- Executive Summary

The purpose of these reports is to assist the regulatory agencies in gaining a better understanding of the impact of the Act on institutions that are subject to its provisions, to assess the usefulness of the disclosure information, to determine ways to improve regulations and enforcement, and to suggest methods for improving the institutions' ability to comply with the requirements of the Act and Regulation C.

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*This report was prepared by Contract Research Corporation, Belmont, Massachusetts under subcontract to JRB.

SUMMARY

PURPOSE

The purpose of this report is to assess the utility of the current form of the Home Mortgage Disclosure Act and to present observations on alternative forms.

SCOPE AND METHODOLOGY

This report presents a summary and an assessment of the major findings of the two-year study on the Home Mortgage Disclosure Act and its data. The study findings are based primarily on data obtained from three Standard Metropolitan Statistical Areas (SMSAs)--Buffalo, Chicago, and San Diego. A random sample of 44 depository institutions in these three SMSAs was selected as the basis for the analysis. The sample included eight institutions in Buffalo, ten in San Diego, and twenty-six in Chicago. An extensive audit and analysis was conducted to determine the accuracy with which the 1977 mortgage disclosure statement of these 44 institutions were prepared. Data were also obtained on procedures and costs associated with the preparation of mortgage disclosure statements.

Additional data on the total volume of mortgage lending were gathered and analyzed for each of the three SMSAs. This analysis yielded an estimate of the percentage of the total volume of mortgage lending attributable to depository institutions subject to Federal or state disclosure reporting.

Further analyses were undertaken to identify methods for improving Regulation C, the methods used by institutions to geocode property addresses to census tracts, and the procedures used in compliance examinations. Finally, an assessment was made of the usefulness and the cost of home mortgage disclosure data, and conclusions are reached regarding the extension of the Act and the steps necessary for improving the quality and usefulness of the data.

Chapter 2 of this report presents an assessment of the utility of the current form of the Home Mortgage Disclosure Act in terms of its potential and actual usefulness, and its cost. Chapter 3 presents observations on the utility and cost of several alternative forms of the Act.

Analysis of the Current Form of the Home Mortgage Disclosure Act

In this report an assessment is made of the extent to which mortgage disclosure data are potentially useful in determining whether depository institutions are complying with Title VIII of the Civil Rights Act of 1968 (hereafter referred to as Title VIII), the Equal Credit Opportunity Act (ECOA) the Community Reinvestment Act (CRA), and their implementing regulations. The potential usefulness of the data is analyzed in terms of the limitations imposed by its content, scope, and completeness.

Next, a summary is presented of the extent to which mortgage disclosure data are actually being used by the public, the regulatory agencies and the depository institutions. An assessment is made of the actual usefulness of the data to each of these users, and conclusions are drawn regarding whether the data are sufficiently useful to warrant continued disclosure. The study findings on the accuracy with which mortgage disclosure data are currently being prepared by depository institutions are important consideration in assessing the usefulness of the data These findings indicate that steps need to be taken to improve the accuracy with which property addresses are being geocoded to census tracts and loan data are being aggregated into disclosure statements. Specific steps are recommended to increase the accuracy level of the data and its resultant usefulness. The steps include changes to Regulation C and the implementation of improved examination procedures.

The cost of the Home Mortgage Disclosure Act is discussed from two viewpoints. First, the costs incurred by depository institutions in the preparation of disclosure statements are presented and analyzed. This analysis is based upon cost information obtained during a survey of 44 depository institutions in the Buffalo Chicago, and San Diego SMSAs. The cost findings are presented in terms of the cost per loan disclosed and the major factors that influence the cost. An estimate of the industry-wide burden is made based on the assumption that the average cost per loan in the three SMSAs is representative of the average cost per loan for all SMSAs.

Estimates are made of the number of person-years required to assess the accuracy of mortgage disclosure data during compliance examinations. These estimates are based upon suggested examination procedures developed during the study. The procedures were an outgrowth of the accuracy analysis during which the methods used by depository institutions were studied to determine the major causes for accuracy problems.

Finally, the overall usefulness of the mortgage disclosure data is assessed against its cost, and conclusions are reached concerning the appropriateness of extending the Home Mortgage Disclosure Act.

Observations on Alternative Forms of the Home Mortgage Disclosure Act

A brief discussion is presented on the utility and cost of several alternative forms of the Home Mortgage Disclosure Act. One set of alternatives involves changes in the content of the data disclosed under the act and the other set of alternatives involves changes in the scope of institutions required to report under the Act. Potential changes in the content include the addition of data on 1) factors reflecting demand for housing credit, 2) deposits, 3) aggregate mortgage portfolio, and 4) other types of loans. Potential changes in the scope include extension to institutions in non-SMSA areas and institutions with assets less than $10 million. This discussion is limited to observations based upon insights gained during the course of the study rather than the results of a more rigorous analysis.

FINDINGS

The major findings of the study are as follows:

1. Home mortgage disclosure data are potentially useful in 1) assessing an institution's lending practices as prescribed by CRA factors (e) and (i), 2) alerting users to possible discriminatory lending practices based upon the location of the

dwelling, and 3) alerting users to possible discriminatory lending practices related to several other prohibited bases (e.g., race, color, national origin) when geographic patterns for these can be established.

2. Home mortgage disclosure data are both useful and essential to the regulatory agencies in fulfilling their statutory responsibilities.

3. Home mortgage disclosure data appear to be useful to consumer and public interest groups but the extent of their usage is not well defined.

4. Home mortgage disclosure statements are infrequently requested by individual citizens and seldom used by depository institutions.

5. Home mortgage disclosure statements offer a far from complete picture of total mortgage lending in an SMSA. Depository institutions subject to disclosure reporting can provide as little as 62.5 percent of the total volume of mortgage loans within an SMSA.

6. A significant percentage of home mortgage disclosure statements are too inaccurate to serve their intended purpose.

7. The accuracy of home mortgage disclosure statements can be increased to an acceptable level by a) revising Regulation C to clarify ambiguities in the criteria for including certain types of loans and loan amounts in disclosure statements and to require depository institutions to maintain a loan listing showing data on the loans included in the disclosure statement and b) implementation of the suggested examination procedures for assessing the accuracy of geocoding and aggregation of disclosure data.

8. An additional annual investment of more than 20 person years is required to conduct the compliance examinations needed to assure the accuracy of home mortgage disclosure data.

9. An average cost of $1.42 per each loan in the disclosure statement was incurred by the sampled depository institutions in preparing their 1977 disclosure statements.

10. The annual industry-wide cost incurred by depository institutions in the preparation of their disclosure statements is estimated at $5.8 million based on an assumed cost of $1.42 per loan and 08 million loans including first trust loans and home improvement loans) subject to disclosure.

11. The degree to which both the current and alternative forms of mortgage disclosure data are useful to the public needs to be better defined and the accuracy of the current form of the data needs to be improved before the Act is extended to include alternative forms of data.

CONCLUSION

The central conclusion of the study is that the Home Mortgage Disclosure Act should be extended. This conclusion, however, is based on the following four conditions:

- The regulatory agencies will continue making extensive use of the data
- Use of the data by public interest groups and/or the general public is confirmed to be considerable
- The regulatory agencies take appropriate steps to ensure that the data disclosed are accurate
- That Regulation C be revised to require disclosure statement preparation in a standard format, and that state exemptions be based on conformance with the standard format and contents specified in Regulation C.

CHAPTER 1
INTRODUCTION

1.1 PURPOSE

The purpose of this report is to assess the utility of the current form of the Home Mortgage Disclosure Act and to present observations on alternative forms.

1.2 SCOPE

This report addresses the utility of the Home Mortgage Disclosure Act and "substantially similar" state regulations. For purposes of this report, the utility of home mortgage disclosure data is assessed in terms of its usefulness and its cost.

1.2.1 Utility of the Current Form of Disclosure Data

An assessment of the utility of the current form of home mortgage disclosure data requires that three questions be answered. The first is, to what extent are the data potentially useful? In this report, the potential usefulness of home mortgage disclosure data is examined in terms of the extent to which the data can provide meaningful insights into geographic lending practices that are unlawful and discriminatory--where such practices exist.* The second question is, to what extent are the data actually used or useful? A first component of the actual usefulness of home mortgage disclosure data is the extent to which representatives of the public citizens groups, regulatory agencies, and depository institutions use the data and consider the data valuable. A second component of actual usefulness involves an assessment of the inaccuracies and ambiguities existing in the data and which serve to reduce its usefulness. The study findings accuracy have decisive impact on both the actual usefulness of the data, as well as on the cost associated with obtaining accurate data. The final question is, what costs are associated with the preparation, enforcement, and use of the data? In this report, the cost to the depository institutions is discussed from three perspectives:

- Average cost per loan on disclosure statement

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*Other possible uses (e.g. urban planning) are not considered within this report.

- Average cost per institution
- Total nationwide cost.

The cost to the regulatory agencies associated with enforcement of the Act is not assessed fully; however, some cost implications derived from the study are presented. The cost to the public is outside the scope of this report.

1.2.2 Observations on the Utility of Alternative Forms of Disclosure Data

This report also considers the utility of alternate forms of the Home Mortgage Disclosure Act Such an assessment involves consideration of the costs and benefits of HMDA should the provisions of the Act and/or Regulation C be changed. Importantly the discussion in this chapter of the utility of alternate forms of HMDA present observations rather than the results of a more methodologically rigorous analysis. These observations are based on the insights accumulated by the study team during the two years of the present study. They are limited in nature, and deal only with selected aspects of the various alternatives. The alternatives considered in this report are:

- Changes in the content of data reported under the Act
- Changes in the scope of institutions required to report under the Act.

1.3 METHODOLOGY

The discussion of the utility of the current form of the Home Mortgage Disclosure Act is based upon data presented in companion reports prepared for this study. In fact, this report presents a summary, integration, and assessment of indings from all three phases of the study for which JRB held primary responsibility: Phase II, Accuracy; Phase III, Completeness; and Phase IV, Management Reports.

The findings presented here on the potential and actual uses of the current form of the Home Mortgage Disclosure Act are based upon the analysis presented in the companion report "Compliance Analysis."[1] These findings discuss the usefulness of disclosure data to the public, regulatory agencies, and depository institutions. In the "Compliance Analysis," the potential uses of home mortgage disclosure data analyzed by assessing the content, scope and completeness of the data against the compliance requirements established in the antidiscrimination acts and regulations. The level of use by the regulatory agencies public and depository institutions also addressed. Data in the "Compliance Analysis" regulatory agency use were obtained through limited survey and that the level of use by the public and depository institutions were obtained during on-site visits at depository institutions.

The study findings on completeness, a component of the potential usefulness of the data, have been presented in a companion report discussing the findings from Phase III of the present study.[2] This report presents data from the Chicago San Diego, and Buffalo SMSAs on the total volume of residential mortgage loan originations, and the percentage attributable to depository institutions subject to Federal or state disclosure reportings.

The study findings on the accuracy with which depository institutions are preparing their disclosure statements appear in a companion report "Accuracy of Disclosure Statement Preparation."[3] This report presents data from the Chicago San Diego and Buffalo SMSAs on two major types of errors associated with disclosure statements: geocoding and aggregation. These data were obtained during audits at 44 institutions in the three SMSAs.

The costs associated with the current form of the Home Mortgage Disclosure Act have been presented in a companion report entitled "Cost of Compiling Home Mortgage Disclosure Statements."[4] In this investigation, data were collected on the costs incurred by 44 institutions in the three SMSAs associated with preparation of disclosure statements These operational costs were determined for each of the 44 depository institutions in terms of the costs incurred per each loan reported on the disclosure statement. The results from the study of cost provide a highly useful, although not statistically valid, indicator of the costs associated with HMDA on a per loan basis.

The finding on the cost/loan associated with HMDA is used in this report to estimate the total industry-wide burden of HMDA. This is done by estimating the number of mortgage and home improvement loans originated by depository institutions subject to the Act and multiplying this estimate by the estimate of the cost per loan.

1.4 CONTENTS OF THIS REPORT

Chapter 2 of this report presents a discussion of the utility of the current form of the Home Mortgage Disclosure Act. The utility of alternate forms of HMDA are presented in Chapter 3.

CHAPTER 2

UTILITY OF THE HOME MORTGAGE DISCLOSURE ACT

This chapter discusses the utility of the data currently disclosed under the Home Mortgage Disclosure Act and "substantially similar" state regulations. The utility of the data is assessed in terms of its usefulness and its cost.

Taken in their entirety, home mortgage disclosure statements constitute a large volume of data prepared by thousands of depository institutions for use by the public and by public officials. The requirement that depository institutions disclose data on the geographic pattern of mortgage lending was intended to enable users of the data to make informed judgments on the existence or possible existence of redlining practices.

To assess whether the mortgage disclosure data do or can serve their intended purpose at a reasonable cost, three questions must be answered. These are:

- To what extent are the data potentially useful?
- To what extent are the data actually used or useful?
- What costs are associated with the preparation, enforcement, and use of the data?

An answer to all three questions is necessary because the degree to which a given body of data are actually useful can differ substantially from the degree to which the data are potentially useful.

The study findings discussed in this chapter indicate that both the potential and the actual usefulness of home mortgage disclosure data are significant, but that the data cannot be employed to their full potential because of accuracy limitations. Steps are suggested by which the accuracy of the data can be improved, thereby increasing the extent to which the data are actually useful. There is, however, a substantial cost associated with both the preparation and the enforcement of home mortgage disclosure data, and any steps taken to improve the accuracy of the data in order to increase its usefulness will have an impact on this cost. Thus, the utility of home mortgage disclosure data must be viewed in the context of the relationship among its potential usefulness, actual usefulness, and cost.

Potential Usefulness: The potential usefulness of mortgage disclosure data is a function of (1) the seriousness of the problem (i.e. redlining) it is intended to address, (2) the degree to which the data offer a meaningful insight into the problem, and (3) the extent to which disclosing these data deter redlining. Few would argue with the importance of addressing existing problems of redlining. The actual incidence of redlining, however, is less clear and this issue is not addressed in this study. Nor does this study address the use of the mortgage disclosure data as a deterrent to redlining. In this report, the potential usefulness of home mortgage disclosure data is examined in terms of the extent to which the data can provide meaningful insights into geographic lending practices that are unlawful and discriminatory -- when and if such practices exist.

The potential usefulness of mortgage disclosure data is analyzed in terms of the limitations imposed by the content, scope, and completeness of the data. For purposes of assessing its potential usefulness, it is assumed that home mortgage disclosure data are -- or can be made -- sufficiently accurate for use. For purposes of assessing its actual usefulness, however, the impact of the current accuracy of the home mortgage disclosure data is analyzed.

Actual Usefulness: A summary is presented of the degree to which mortgage disclosure data are actually being used. A clear picture of the degree of use by individual citizens and by the regulatory agencies exists, but less clear is the level of use by consumer groups. Users of these data inevitably form subjective judgments about its usefulness. These judgments are based upon the users' feelings about the data's intrinsic value and upon the availability of alternative sources for similar data.

Consumer groups have in the past been very vocal about their perception of the value of data on geographic mortgage lending patterns. Mortgage disclosure data are indeed unique in that no other source of similar data exists. Most supporters of the concept of home mortgage disclosure data as well as users of the data are not fully aware of the ambiguities or inaccuracies that exist in these data. Consequently, their perceptions of the value of the data may be higher than is warranted. A major outcome of this study has been to assess the accuracy of mortgage disclosure data currently being prepared. These findings on accuracy are discussed in this chapter and have a decisive impact on both the actual usefulness of the data, as well as on the cost associated with obtaining accurate data.

Cost of HMDA: The major costs associated with the Home Mortgage Disclosure Act are (1) the cost to depository institutions in preparing the mortgage disclosure statement, (2) the cost to the regulatory agencies in enforcing the Act, and (3) the cost to the public in collecting, processing, and analyzing the data. The cost to the depository institutions is discussed from three prospectives:

- Average cost per loan on disclosure statement
- Average cost per institution
- The national burden.

The cost to the regulatory agencies associated with enforcement of the Act is not assessed fully; however, some cost implications derived from the study are presented. The cost to the public is outside the scope of this report.

2.1 THE POTENTIAL USEFULNESS

The discussion on the potential usefulness of mortgage disclosure data is in the form of summary derived from the analysis presented in a companion report entitled "Compliance Analysis."[1] The prohibited bases and assessment factors set forth in the antidiscrimination acts and regulations are summarized in Section 2.1. The potential usefulness and limitations of home mortgage disclosure data are discussed in Section 2.1.2 and the conclusions are summarized in Section 2.1.3.

2.1.1 The Requirements

The data generated under the Home Mortgage Disclosure Act are potentially useful in detecting two types of lending practices that have come under legislative scrutiny: discrimination and redlining. Many definitions for these two terms exist. For the purposes of this analysis, discrimination is defined as an unlawful differential real estate financing decision made by a depository institution based upon the personal characteristics of a prospective borrower or the age of the dwelling for which financing is sought. Redlining is defined as an unlawful differential real estate financing decision made by a depository institution based upon the geographic location of the property.

Title VIII and the Equal Credit Opportunity Act require that regulatory agencies ensure that subject depository institutions are not discriminating in their extensions of credit for housing based on numerous prohibited bases. These bases and their corresponding legislation are shown in Table 2.1.

TABLE 2.1: PROHIBITED BASES CONTAINED IN ANTIDISCRIMINATION ACTS AND REGULATIONS

PROHIBITED BASIS	Title VIII, FHLBB Pts 528,531.8, FDIC Pt 338	ECOA, Reg. B, FHLBB Pts 528, 531.8, FDIC Pt 338	FHLBB Pts 528,531.8
Race	X	X	X
Color	X	X	X
Religion	X	X	X
National Origin	X	X	X
Sex	X	X	X
Age of Dwelling			X
Location of Dwelling			X
Marital Status		X	
Age of Individual		X	
Because All or Part of Applicants' Income from Public Assistance		X	
Exercise of Right Under Consumer Credit Protection Act		X	

The Community Reinvestment Act does not establish prohibited bases. The regulations promulgated pursuant to CRA do, however, provide 12 assessment factors for examiners to consider in assessing an institution's record of serving the credit needs of their local communities. Two of these assessment factors involve the geographical distribution of mortgage lending, and thus render mortgage disclosure data potentially useful in assessing an institution's record. These two factors are:

> (e) the geographic distribution of the depository institution's credit extensions, credit applications, and credit denials;
>
> (i) the depository institution's origination of residential mortgage loans, housing rehabilitation loans, home improvement loans, and small business or small farm loans within its community, or the purchase of such loans originated in its community.

A special consideration of CRA is that depository institutions are encouraged to serve the credit needs of low-and moderate-income areas in their local community. In this report, CRA assessment factors (e) and (i), and the special consideration given low-and moderate-income neighborhoods in the Act, are combined with the 11 prohibited bases to form 14 "compliance requirements" which serve as the basis for the analysis.

2.1.2 Potential Usefulness of Home Mortgage Disclosure Data

An Alerting Mechanism A mortgage disclosure statement shows, by census tract, the number and amount of mortgage loans originated or purchased in a given year by individual depository institution. Loans originated or purchased on properties located within the SMSA of the depository institution are arrayed by loan type and the census tract in which the properties are located. Those located outside the SMSA are aggregated only by loan type.

By showing the aggregate volume of mortgage lending by the institution for properties located within each census tract in the SMSA of the institution, mortgage disclosure data provide a means for detecting differential lending patterns among the census tracts. These differential lending patterns can serve as an "alerting mechanism" indicating the possibility that the depository institution has engaged in redlining or discrimination on a prohibited basis. This alerting mechanism can signal a user to the possible need for further investigation into redlining or discrimination.

Potential Uses: The regulations promulgated pursuant to the Community Reinvestment Act under assessment factor (i), require that regulatory agencies assess the record of a depository institution in originating or purchasing mortgage loans and home rehabilitation or improvement loans within its community. The regulations further require, under assessment factor (e), that regulatory agencies assess the record of a depository institution in terms of the geographic distribution of its credit extensions. Home mortgage disclosure data are not only potentially useful for making these assessments, but these data are necessary before the regulatory agencies can discharge their regulatory responsibility.

Home mortgage disclosure data cannot be used to detect differential patterns of lending based on all 11 rohibited bases shown in Tabl 2. . Home mortgage disclosure data are useful as an alerting mechanism only when the prohibited basis is, by nature geographically defined, or when relevant demographic information is available to relate the prohibited basis to geographic patterns. For example, the "location of the dwelling" is a geographically defined prohibited basis (under FHLBB parts 528 and 531.8) and mortgage disclosure data are necessary to assess lending on this basis. In cases where certain census tracts have significant minority populations based upon factors such as race, color, religion, national origin, or where they have significant percentages of older dwellings then mortgage disclosure data can potentially be used as a surrogate to detect dissimilar lending patterns among census tracts which, in turn, could have a discriminatory effect on the population and houses contained therein.

Inherent Limitations: The potential usefulness of mortgage disclosure data should be viewed in the context of the inherent limitations associated with the content and scope of the data. First, because population and housing characteristics are generally not homogeneous throughout a census tract, information on aggregate lending in a census tract cannot be used under the assumption that all people, areas, or houses within the ract were given similar consideration. Although the disclosure data do give insight into the lending pattern for a census tract, they reveal nothing about the fate of individual applications which may vary greatly. Second, discrimination can occur not only in the decision to grant a mortgage loan, but also in the terms and conditions offered. Mortgage disclosure data cannot reveal instances of the latter form of discrimination. Third, the mortgage disclosure data show nothing about the individual characteristics of loan applicants or prospective applicants. Finally, and by far most importantly, mortgage data used alone do not provide an adequate basis for a final determination of whether depository institutions are meeting compliance requirements. Additional data are needed before such a determination can be made.

Completeness Limitation: A second limitation on the potential usefulness of mortgage disclosure data is the fact that these data do not reflect the complete mortgage lending within an SMSA. Those lenders not subject to the reporting requirements of the Act include:

- Depository institutions with assets under $10 million or with no office in an SMSA
- Mortgage Bankers
- Miscellaneous companies (e.g., insurance companies)
- Private parties (e.g., seller-financing)

The extent to which these other lenders contribute to lending is discussed in detail in a companion report entitled "Completeness."[2] The study found that in 1977 depository institutions originated 81.7 percent of the residential mortgage loans in the United States. This percentage includes lending by depository institutions who are not subject to disclosure reporting because of asset size or location. A detailed study of completeness in San Diego County, California; Erie County, New York; and Cook County, Illinois, revealed that the percentage of mortgage lending by depository institutions subject to disclosure reporting requirements in 1977 was 62.5, 81.7, and 87.9 percent, respectively. These findings indicate that home mortgage disclosure statements offer a far from complete picture of total mortgage lending in a given area, and this factor must be considered when overall lending patterns are assessed. Although the completeness issue has less impact on those seeking to isolate and study the lending patterns of a particular institution group of institutions subject to the Act, they do indicate that competition from other lenders should be considered when evaluating the lending behavior of institutions on an SMSA basis.

2.1.3 Conclusions on Potential Usefulness

In summary, mortgage disclosure data are potentially useful in 1) assessing an institution's lending practices as prescribed by CRA factors (e) and (i), 2) alerting users to possible discriminatory lending practices based upon the location of the dwelling, and alerting users to possible discriminatory lending practices related to several other prohibited bases (e.g., race, color, national origin) when geographic patterns for these can be established.

In spite of limitations associated with its content, scope, and completeness, mortgage disclosure dat have substantial potential for use in the assessment of the geographical mortgage lending patterns of depository institutions. Furthermore, since the regulatory agencies have a statutory obligation to assess geographic mortgage lending patterns within SMSAs and communities, these data or data substantially similar are essential to fulfill this requirement. At present, no other source of geographically arrayed mortgage lending data exist.

2.2 ACTUAL USEFULNESS

Those using mortgage disclosure data can be classified into four categories:

- The public and public officials
- The consumer and public interest groups
- The regulatory agencies
- The depository institutions

Each of these four categories of users utilize mortgage disclosure data for differing purposes and to differing degrees. In addition, each has formed a different perception of the degree to which the data are useful. Prior to this study, these perceptions were not based upon a full understanding of the ambiguities and inaccuracies associated with the data. The findings of this study on the accuracy with which mortgage disclosure statements are being prepared serve to define more precisely the extent to which these data are actually useful.

The available information on uses and perceptions of each of the categories of users are summarized in the following four sections. Next, the findings and implications of the accuracy investigation are presented. Finally, conclusions on the actual usefulness of these data are summarized.

2.2.1 Use by Individual Citizens and Local Public Officials

During the Accuracy Phase of this study, limited survey to determine the number of requests by the public for disclosure statement was performed. Forty-four institutions in San Diego, Buffalo, and Chicago provided information on the number of requests they had received for their fiscal year 197 disclosure statement. Table 2. summarizes the number of requests received for disclosure statements by the institutions studied. Eighteen of the forty-four institutions did not receive a single request for their disclosure statements. The survey also indicates that no institution received more than eight requests, and that fully 75 percent received three of fewer requests.

TABLE 2.2: NUMBER OF REQUESTS BY THE PUBLIC FOR MORTGAGE DISCLOSURE STATEMENTS

Number of Requests(R)	Number of Institutions(I) with 'R' Requests	Percentage of Institutions with 'R' Requests	Percentage of Institutions with 'R' or Fewer Requests
0	18	40.9	40.9
1	8	18.2	59.1
2	4	9.1	68.2
3	3	6.8	75.1
4	3	6.8	81.9
5	0	0	81.9
6	4	9.1	91.0
7	2	4.5	95.5
8	2	4.5	100.0

A more extensive study of requests for disclosure statements was performed by the United States League of Savings Associations.[5] The U.S. League surveyed 2,800 savings and loan associations to determine the number of public requests for the report. The League found that 71 percent of the 1,943 responding associations had not received a single request for their 1977 fiscal year disclosure statement, and 99 percent of those responding had received five or fewer requests.

The results from both surveys are consistent and indicate that disclosure statements are not being requested in large numbers by members of the general public or local public officials. These findings strongly suggest that the requests being made for these data by individual citizens or local public officials are not sufficient, by themselves, to justify the burden associated with preparation of the data. This finding, however, does not necessarily mean that insignificant use is being made of the disclosure statements. Although the number of requests for disclosure statements is an important indicator of overall use, it is by no means the only factor to be considered. One request for a disclosure statement, particularly if made by a consumer or public interest group can result in use by numerous individuals who are subsequently provided with the data or with the results of the analysis.

2.2.2 Use and Perceptions of Consumers and Public Interest Groups

In light of the fact that the demand for disclosure statements by private citizens is low, an assessment of the usefulness of these data to consumer and public interest groups provides the primary basis for determining the overall usefulness to the public. Although these groups strongly advocate the usefulness of these data, their level of use has not yet been fully documented. The Department of Housing and Urban Development has conducted a study to document ways in which these data can be used and the guide book prepared in this study describes several case studies in which mortgage disclosure data were used.[6]

A study of disclosure statement use in the District of Columbia conducted under the supervision of James C. Sivon, Director of Investigations and Research for the House Banking Committee, gives insight into the range of uses that can result from a limited number of requests for the data.[7] Although Sivon's study of the number of requests was consistent with the low levels reported earlier, his survey of consumer and community groups indicated a wide range of uses currently being made of the data. These included:

- Use of the home mortgage disclosure data to prepare the latest District housing plan.

- Use of the data in petitioning financial institutions on branching and lending policies. An example is use of the data to develop a loan policy aggreement between a large Washington based savings and loan association and the Adams-Morgan Community.

- Use of the data by groups outside the city, such as New York Public Interest Research Group, and National Peoples Action, among others.

- Indirect use of data by the D.C. Commission on Residential Mortgage Investment in 1976.

2.2.3 Use and Perceptions of the Regulatory Agencies

A limited survey was conducted to determine the extent to which home mortgage disclosure data are currently being utilized in compliance activities by the Federal Home Loan Bank Board and Federal Deposit Insurance Corporation. The survey was conducted by first discussing with representatives of the Federal Home Loan Bank Board and Federal Deposit Insurance Corporation the policies and procedures for use of the mortgage disclosure data. These discussions covered the current use of these data in compliance examinations as well as their use in civil rights and compliance investigations. Following these discussions arrangements were made for telephone discussions with district examiners and civil rights specialists. Telephone interviews were conducted with specialists and examiners from the first and fourth FHLBB districts and the FDIC Madison and New York regions Answers to several questions were sought during these discussions. These include:

1. What guidance or directives has the Agency issued to examiners regarding the use of mortgage disclosure data in compliance examinations?
2. Specifically, how are examiners and civil rights specialists using mortgage disclosure data in compliance examinations?
3. Are the home mortgage disclosure data valuable in determining compliance, and what would the impact be if the Act were discontinued and the data became unavailable?

Answers to these three questions are summarized in the following paragraphs.

Instructions to Examiners: Representatives from both the Federal Home Loan Bank Board and the Federal Deposit Insurance Corporation indicated that examiners have been "instructed" to use the home mortgage disclosure data in their compliance examinations. The specific methods for the use of these data, however, are not prescribed. Instead, decisions on the particular procedures for its use are left to the judgment of the field examiners and civil rights specialists.

Use in Compliance in Examinations and Investigations: Field examiners and civil rights specialists are currently using home mortgage disclosure data as an integral part of compliance examinations and civil rights investigations. Use of the data is, of course, confined to examinations of institutions located inside Standard Metropolitan Statistical Areas and with assets of $10 million or more, since institutions not meeting these criteria are not required to prepare disclosure statements.

The procedures for using mortgage disclosure data vary significantly, but essentially these data are used to alert examiners and civil rights specialists to possible discriminatory lending patterns or practices reflected in the geographic distribution of an institution' loans. Some interviewed indicated that use of the data is restricted to assessing an institution's lending practices in accordance with regulations pursuant to CRA, while others said it use also extends examining compliance with certain of the prohibited bases established under Title VIII and ECOA.

The Value of the Data and the Impact of its Loss: Those interviewed were asked if home mortgage disclosure data are valuable in determining compliance with antidiscrimination acts and regulations. The unanimous response was that mortgage dislcosure data are a valuable tool in the compliance examination process.

In spite of the limitations in the nature and usefulness of home mortgage disclosure data, the consensus of those interviewed was that the examination process would suffer if the mortgage data became unavailable. "We do feel it is a valuable tool," a representative of the Federal Home Loan Bank Board stated.

> We would not be happy if it were lost, and, if we did lose (the data), we would recommend that current regulations be revised to obtain similar information.

The reason behind this observation is, as one representative of the Deposit Insurance Corporation put it, "that there is nothing at all like it to replace it. Although examiners have data on the census tracts of loans available to them on loan rosters this information is not aggregated. Data in nonaggregated form are useful only for the most preliminary determination of whether institutions are discriminating based on the location of property, or if they are serving the credit needs of their local communities. Furthermore, such preliminary determinations using nonaggregated data are only possible in smaller institutions where the sheer number of loans is not overwhelming. One examiner summarizes the point this way:

> Home mortgage disclosure data are not the ultimate answer. Nevertheless, they are better than nothing and thus discontinuing them would mean the loss of a helpful tool. If lost, they would have to be replaced with something.

It should be noted, however, that all field examiners and civil rights specialists interviewed stopped short of stating that the Home Mortgage Disclosure Act itself should be continued. Although they acknowledged the usefulness of home mortgage dislcosure data as a compliance tool, they were sensitive to other issues such as the burden incurred in preparing the statements, and the level of use by the public. Consequently, they all felt compelled to make no recommendation about continuation of the Act.

2.2.4 Use and Perceptions of Depository Institutions

The survey indicates that depository institutions themselves are making little use of the data. The most common use appears to be assessment of a competitor's lending profile. A few institutions reported use of the data for "analysis of the success of their own affirmative loan marketing plan. One possible use of home mortgage disclosure data is for depository institutions data to advertise a good record of serving the credit needs of all neighborhoods in its local community. Use of the data in this way, however, appears limited.

Furthermore, depository institutions hold a radically different view of the use of home mortgage disclosure data than do public interest or consumer groups. Their perception is that these data are either little used or actually misused. A representative of one savings and loan in California commented, "The general public does not understand the census tract concept. It shows only loans recorded and does not take into consideration demand for loans in an area. It can, therefore, be very misleading."

These fears have a basis in reality, for home mortgage disclosure data have, on occasion, been used imprecisely or as the basis for misleading conclusions. In this regard, one bank representative in Buffalo commented:

> We believe the required data do not clearly answer the concerns or prove any charges made by consumer groups. Practically every conclusion drawn can be successfully argued against due to variations in demand, home buying trends, etc.

The conclusion of depository institutions is both clear and consistent. One representative of a savings and loan association in California undoubtedly spoke for countless others when he responded to our survey with the observation:

> In view of the lack of interest in the report by the public, we wonder if this report serves any useful purpose in relationship to its cost of preparation.

2.2.5 Impact of Accuracy on Usefulness

The level of accuracy at which mortgage disclosure statements are currently being prepared has a significant impact on the usefulness of the data. Only if the the data on disclosure statements accurately reflect the actual lending patterns of depository institutions do they give a meaningful and useful picture of the geographical pattern of the institution's mortgage loans. The study findings on accuracy, discussed in detail in a companion report entitled, "Accuracy of Disclosure Statement Preparation"[3] are summarized in the following discussion.

Findings on Geocoding Accuracy: Using the data collected on geocoding in the three study SMSAs, a statistically valid estimate of the geocoding accuracy of the institutions in each of the three SMSAs was derived. The results for the three SMSAs, expressed in terms of the mean percentage of accuracy for all institutions, the standard error, and the 95 percent confidence interval, are shown in Table 2.3.

TABLE 2.3: GEOCODING ACCURACY FOR ALL INSTITUTIONS IN
BUFFALO, CHICAGO, AND SAN DIEGO

Item	Buffalo	San Diego	Chicago
Mean Percentage of Accuracy	93.16	92.05	82.27
Standard Percentage of Error	1.51	1.49	3.11
95 Percent Confidence Interval	90.2 to 96.1	89.31 to 94.97	76.17 to 88.37

The results of the geocoding accuracy analysis can be expressed on either a "per-institution" or "per-SMSA" basis. For the Buffalo SMSA, for example, it can be stated with 95 percent confidence, that the accuracy with which institutions in the Buffalo SMSA geocoded their property addresses to census tracts for use in their 1977 disclosure statement lies between 90. and 96. percent. Seen on a per-institution basis, however, it can be stated that there is a 95 percent probability that the geocoding accuracy level of any one institution will fall between 90.2 and 96.1 percent. Similar conclusions can be drawn based on the data for institutions in the San Diego and Chicago SMSAs.

The results of the analysis of geocoding accuracy show that depository institutions in the Buffalo and San Diego SMSAs are achieving "acceptable" geocoding accuracy levels, but that approximately 35 percent of the depository institutions in the Chicago SMSA are achieving unacceptable accuracy levels below 80 percent. These results are summarized in Table 2.4.

TABLE 2.4: GEOCODING ACCURACY

SMSA	Number of Institutions Sampled	Accuracy ≥ 80%		Accuracy ≥ 85%		Accuracy ≥ 90%	
		Number	Percent	Number	Percent	Number	Percent
Buffalo	8	8	100	7	87.5	6	75
Chicago	26	17	65	16	61.5	13	50
San Diego	10	10	100	10	100	7	70
Total	44	35	79.5	33	75	27	61

The accuracy results for the Chicago SMSA show that geocoding can be performed accurately, if the currently available address coding guides are obtained and used properly and if the census tract numbers assigned to addresses are accurately recorded and maintained on files for subsequent use in the preparation of the disclosure statement.

Two reasons account for the low accuracy levels achieved by nine of of the twenty-six sampled institutions in Chicago. Six of the nine relied solely on census tract maps or other maps to perform geocoding. Such maps, by themselves, are not adequate for geocoding. Three of the nine either did not use address coding guides properly or did not accurately record and maintain the results of their geocoding of addresses to census tracts.

A companion report entitled "Methods to Improve Geocoding Accuracy"[8] suggests that regulatory examination procedures include a review of the geocoding methods used by depository institutions and recommendations for use of proper geocoding tools (i.e., address coding guides) and record maintenance methods.

Findings on Aggregation Accuracy: Study of aggregation accuracy involves the determination of the accuracy with which data on loans (e.g., census tract, amount, type) were collected, aggregated, and reported on disclosure statements. Results of aggregation accuracy were obtained for 43 institutions in three SMSAs — Buffalo, San Diego, and Chicago. Aggregation errors of four types were defined and analyzed:

> Census tract assignment errors occur when a loan is incorrectly included in a census tract line, or when a loan is incorrectly excluded from a census tract line and where the error could not be attributed to a loan that does not meet Regulation C criteria for inclusion on the disclosure statement.
>
> Computation errors occur when either the number or the dollar amounts of loans on the disclosure statement are incorrect.
>
> Inappropriate loan errors occur when a loan that does not meet the Regulation C criteria for inclusion in a disclosure statement is included in a disclosure statement.
>
> Types of loan errors fall into two categories. The first category occurs when an institution assigns a loan to one type of loan column when in fact the loan belongs in another type of loan column (e.g., FHA instead of conventional). The second category involves nonoccupant loans and occurs either when nonoccupant loans are reported only in the nonoccupant addendum item column and are not spread throughout the other appropriate columns or when nonoccupant loans are not included in the nonoccupant addendum item column.

Four of the eight sampled institutions in the Buffalo SMSA made aggregation errors in more than 50 percent of census tract lines sampled. The most significant problem was census tract assignment errors caused by either incorrectly aggregating loans into a census tract line or incorrectly omitting loans from a census tract line. These errors occur because of inadequacies in the institution's procedures for selecting loans from the file transferring these data to other files, and aggregating the data into the disclosure statement. This causes loans to be over-disclosed or under-disclosed in the census tract line. A total of 99 loans were over-disclosed and 82 loans were under-disclosed in the 210 census tracts in the sample.

Three of the ten sampled institutions in the San Diego SMSA made errors in more than 50 percent of the census tract lines in the sample. The two most significant problems were census tract assignment errors and the inappropriate inclusion of short-term construction loans. A total of 21 loans were over-disclosed, and 81 loans were under-disclosed in the 225 census tracts in the sample. A total of 43 inappropriate loans with a value in excess of $20 million were included in these census tracts. Many of these were short-term condominium construction loans in excess of $1 million each.

Eighteen of the 25 sampled institutions in the Chicago SMSA made errors in more than 50 percent of the census tract lines in the sample. Census tract assignment errors were the most significant problem. A total of 2,270 loans were over-disclosed and 579 loans were under-disclosed in the 435 census tracts in the sample.

The number of aggregation errors and the dollar amount of the aggregation errors found in each sampling unit of 15 census tracts are only meaningful when viewed relative to the overall number and amount of loans that were included in the census tracts. Accordingly two major indices, expressed [illegible] percentages, [illegible] used in this analysis to assess each institution's aggregation error level. The first index is the number of errors made per census tract relative to the number of loans per census tract. The second index is the dollar amount of errors made per census tract relative to the dollar amount of loans per census tract. Some institutions incurred significant error levels on the basis of the number of errors per loan in each census tract, while other institutions incurred significant error levels on the basis of the amount of error per amount of loans in each census tract.

A judgment was made that error levels in excess of 20 percent, on the basis of either the number or the amount of error, render a disclosure statement too misleading to be considered acceptable. An error level between 10 to 20 percent was judged to render the acceptability of a disclosure statement to be marginal. An error level of less than 10 percent was judged to result in an acceptably accurate disclosure statement.

Table 2.5 presents the results from the aggregation analysis for the 43 institutions in the three SMSAs. The number and percentage of institutions that were found to be in each of the three error levels are shown in the table. An institution was placed in one of the error levels in accordance with the higher of its two error levels (i.e., number or amount of errors).

TABLE 2.5: PERCENTAGE OF AGGREGATION ERRORS BY INSTITUTIONS IN THREE SMSAs

Error Level Per Census Tract	SMSA						TOTAL	
	Buffalo Institutions		San Diego Institutions		Chicago Institutions			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-10 Percent	1	12.5	2	20	2	8	5	11.6
10-20 Percent	3	37.5	3	30	3	12	9	20.9
Greater than 20 Percent	4	50.0	5	50	20	80	29	67.5

Four of the eight institutions in the Buffalo SMSA incurred per-tract-error levels greater than 20 percent, and three of the eight incurred per-tract-error levels between 10 and 20 percent. Only one institution incurred a per-tract error level of less than 10 percent.

Five of the ten institutions in the San Diego SMSA incurred per-tract-error rates greater than 20 percent, three of ten incurred per-tract-error levels between 10 and 20 percent, and two incurred per-tract-error levels of less then 10 percent.

Twenty of the twenty-five institutions in the Chicago SMSA incurred per-tract-error levels greater than 20 percent, three of twenty-five incurred per-tract-error levels between 10 and 20 percent, and two institutions incurred per-tract-error levels of less than 10 percent.

Although these findings of aggregation accuracy are not based upon a statistically derived sample for the SMSA, they do provide strong evidence that depository institutions are not aggregating the disclosure data accurately. Two steps to overcome this deficiency are suggested in companion report entitled "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statement."[9] First, it is suggested that institutions be required to maintain a loan listing containing complete information (e.g. loan number type of loan, census ract, etc. on each loan in the disclosure statement. Second, it is suggested that regulatory examiners "spot check" the accuracy of aggregation using procedures outlined in the companion report.

2.2.6 Impact of Non-Standard Formats and State Exemptions on Actual Usefulness

The information and insights obtained during both the accuracy and completeness analysis portions of the study were assessed to determine ways in which improvements could be made in Regulation C. The results of this analysis and suggestions for revisions to Regulation C are presented in a companion study report entitled "Revisions to Regulation C."[9]

These investigations isolated significant problems associated with non-standard disclosure statement formats and the granting of state exemptions. These problems and their solutions are shown in summary form in Table 2.6.

TABLE 2.6: SOLUTIONS TO PROBLEMS ASSOCIATED WITH NON-STANDARD FORMATS AND STATE EXEMPTIONS

TOPIC	PROBLEM	REVISE		SUGGESTED SOLUTION	BURDEN ON DEPOSITORY INSTITUTION
		ACT	REGS		
Standard Format and Content	Format and content of statements produced by some institutions are substantially different from Regulation C guidelines.	N/A	Yes	Require institutions to prepare statement in standard format.	Minimal except for current state exemptions
State Exemptions	Exemptions have been granted to states whose disclosure statements are substantially different from Regulation C.	No	No	Agencies define "substantially similar" and require strict compliance with definition prior to granting exemption.	Increased difficulty in negotiating state exemptions

Regulation C indicates that mortgage loan information is to be itemized by census tract and "... in a format similar to guideline Form HMDA-1 ..." which is included in the Appendix to the regulation. The regulation further indicates that state-chartered depository institutions can be granted an exemption by the Board of Governors of the Federal Reserve System (Board) if the Board determines the state laws and regulations "... contain (i) requirements substantially similar to those imposed under the Act and (ii) adequate provisions for enforcement."

Most of the disclosure statements prepared by federally-chartered depository institutions were found to be similar in format to the guideline Form HMDA-1. However, the formats of many of the disclosure statements prepared by state-chartered depository institutions were found to be substantially different from the guidelines Form HMDA-1. Furthermore, the criteria used for including loans in the state disclosure statements were different than the Regulation C criteria. For example, both the originated and the purchased loans were combined into a single report in the disclosure statements prepared by state-chartered institutions in Illinois prior to repeal of the state law. Assumed loans were not included in the disclosure statement prepared by the State of California for state-chartered depository institutions. Differences in column headings, relative column positions, rounding loan amounts (i.e., to nearest $1000), and contents make comparison and compilation difficult.

Standard disclosure statement formats and contents are the only means by which public citizens, officials, or public interest groups can readily compile and meaningfully interpret the disclosure information for the depository institutions in an SMSA. Consequently, the first suggestion is that Regulation C be revised to require the preparation of a disclosure statement in the standard format and with the loan classification and criteria specified in Regulation C.

The second suggestion is that in granting exemptions to states, the standard formats and contents specified in Regulation C be required. This would eliminate the existing problem in which the dissimilarities between state and Federal disclosure statements make compilation onerous and interpretation impossible.

2.2.7 Conclusions on Actual Usefulness

The study findings indicate that home mortgage disclosure data are useful to consumer and public interest groups but that the extent of usage by consumer and public interest groups is not clearly defined. Nevertheless, these groups strongly maintain that the data are essential.

The study findings also show that data are not particularly useful to the individual citizens, or the depository institution, and little use of the data is being made by these groups. Finally, the study findings indicate that the data are highly useful to the regulatory agencies. These agencies make extensive use of the data in fulfilling their statutory responsibilities.

The study findings on the accuracy of the mortgage disclosure data indicate that a significant percentage of the disclosure statements are too inaccurate to be used for their intended purpose. These disclosure statements can be made to be both accurate and useful through implementation of several steps:

- Revisions to Regulation C to clarify ambiguities in the criteria under which various types of loans and loan amounts are to be included in the disclosure data.

- Revisions to Regulation C to require depository institutions to maintain a loan listing showing data on the loans included in the disclosure statement.
- Revisions to Regulation C require reports to be prepared in a standard format and state exemptions based on strict conformance this format.
- Implementation of examination procedures to assess the accuracy of geocoding and aggregation of disclosure data and to suggest improved methods for geocoding or aggregation for institutions with poor methods and accuracy levels.

The two major conclusions regarding the actual usefulness of the data are:

- Given the mandate assigned to the depository institutions and the regulatory agencies by ECOA, Title VIII, and CRA, home mortgage disclosure data, or substitute are not only useful but are essential to enable an assessment to be made of the degree to which the mandate is being successfully carried out.
- Substantial improvements in the level of accuracy of the home mortgage disclosure data are necessary before the usefulness of these data can be realized.

The costs associated with the preparation and improvement of these data are discussed in the next section.

TABLE 2.7: RANKING OF ALL SAMPLED INSTITUTIONS BY COST PER LOAN

INSTITUTION CODE	MSB (B) S&L(S) C'ML BANK(C)	STATE(S) FEDERAL (F)	TOTAL COST($)	NUMBER OF LOANS	METHOD USED			PERCENTAGE OF GEOCODING ACCURACY	COST/LOAN($)	RANK
					MORTGAGE LOAN FILE	PREPARATION OF DISCLOSURE STATEMENT	GEOCODING			
CHICAGO - 23	C	S	36	171	M	M	M-4	98	.21	1
CHICAGO - 15	C	S	77	357	A-E	M	M-2	42.5	.22	2
SAN DIEGO - 2	S	F	1,092	2,891	A-E	A-E	M-1	98	.38	3
SAN DIEGO - 7	S	F	765	1,980	A-I	A-I	M-3	87	.39	4
SAN DIEGO - 4	S	S	800	2,006	A-I	A-E	M-3	94	.40	5
CHICAGO - 11	S	F	564	1,195	M	M	M-1	89	.48	6
CHICAGO - 9	S	F	303	490	A-E	M	M-2	59	.62	7
CHICAGO - 7	S	S	235	380	A-E	M	M-1	78	.62	8
CHICAGO - 17	S	S	130	201	M	M	M-6	100	.65	9
BUFFALO - 4	S	F	853	1,202	A-E	A-E	A-1	56	.71	10
CHICAGO - 4	S	F	4,759	6,602	A-I	A-I	A-2	100	.72	11
CHICAGO - 10	S	F	236	317	A-E	A-E	A-2	98	.75	12
SAN DIEGO - 3	S	S	1,085	1,418	A-I	A-E	M-3	76	.76	13
BUFFALO - 8	S	F	744	966	M	M	M-5	84	.77	14
SAN DIEGO - 5	S	F	7,010	8,384	A-I	A-I	M-3	85	.84	15
CHICAGO - 18	C	S	250	282	A	A-E	M-	92	.89	16
SAN DIEGO - 1	S	F	4,778	4,367	A-I	A-I	M-6	91	1.10	17
SAN DIEGO - 6	S	S	933	806	M	A-E	M-3	90	1.16	18
CHICAGO - 20	C	S	458	342	M	M	M-7	90	1.34	19
CHICAGO - 12	S	F	6,210	4,623	A-I	A-I	M-6	92	1.35	20
CHICAGO - 2	S	F	1,749	1,243	A-E	M	M-6	96	1.41	21
CHICAGO - 16	S	F	743	463	M	M	M-2	84	1.61	22
CHICAGO - 3	C	F	122	75	A-E	M	M-2	62	1.63	23
SAN DIEGO - 9	S	S	5,728	3,430	A-I	A-I	M-3	98	1.67	24
CHICAGO - 22	C	S	143	82	M	M	M-6	92	1.75	25
BUFFALO - 2	B	S	6,991	3,883	A-I	A-I	A-1	97	1.80	26
BUFFALO - 3	B	S	6,533	3,457	A-E	A-E	A-1	92	1.89	27
CHICAGO - 23	S	F	7,840	4,107	A-I	A-I	A-2	90	1.91	28
BUFFALO - 7	B	S	2,029	1,043	A-E	A-E	A-1	98	1.95	29
CHICAGO - 8	S	S	333	166	A	A	M-5	89	2.01	30
SAN DIEGO - 8	S	S	5,116	2,520	A-I	A-I	M-3	85	2.03	31
CHICAGO - 26	S	F	2,661	1,170	A-E	A-E	M-6	94	2.28	32
CHICAGO - 13	C	F	710	296	A-E	M	M-6	98	2.40	33
BUFFALO - 6	B	S	7,273	2,301	A-E	A-E	A-1	50	2.31	34
BUFFALO - 5	C	S	8,282	2,752	A-I	A-E	A-1	100	3.01	35
CHICAGO - 5	B	F	2,497	817	A-I	A-I	M-9	93	3.06	36
CHICAGO - 1	S	F	1,850	596	A-E	A-E	M-6	95	3.11	37
CHICAGO - 19	C	S	1,912	610	A-I	A-I	M-8	72	3.14	38
BUFFALO - 1	C	F	623	160	M	M	M-10	97	3.89	39
CHICAGO - 6	C	S	458	109	M	M	M-1	66	4.13	40
CHICAGO - 21	C	S	383	85	A-E	M	M-2	61	4.53	41
CHICAGO - 24	C	F	386	85	A	M	M-7	99.5	4.54	42
SAN DIEGO - 10	F	F	366	47	M	M	M-2	98	7.79	43
CHICAGO - 14	C	S	1,098	80	A-E	M	M-7	53	13.73	44

METHOD USED CODES:

Mortgage Loan File:
Preparation of Disclosure Statement:

A-I Automated Using Internal Sources
A-E Automated Using External Sources

B/Mutual Savings Bank

GEOCODING:
A-1 Automated Using External Service Bureau
A-2 Automated and Manual for Non-Matches
M-1 Manual Using Sims ACG
M-2 Manual Using CTM
M-3 Manual Using TBM
M-4 Manual Using D&B
M-5 Manual by Appraiser
M-6 Manual Using Sims ACG & CTM
M-7 Manual Using CTM & D&B
M-8 Manual Using CTM & Street Map
M-9 Manual Using Sims ACG, CTM, and D&B
M-10 Manual By Loan Officer

Respondent institutions were found to use a variety of methods and procedures to prepare their disclosure statements. In fact, the study found no two institutions with identical procedures for geocoding, file maintenance, and aggregating data into the disclosure statements.

The number of institutions using manual and automated methods for each of the three primary aspects involved in the preparation of disclosure statements is shown in Table 2.8.

TABLE 2.8 METHODS FOR PREPARING DISCLOSURE STATEMENTS

	NUMBER OF INSTITUTIONS					
TYPE	Mortgage Loan Files		Preparation of Disclosure Statement		Geocoding Method	
	Manual	Automated	Manual	Automated	Manual	Automated
[illegible]	2	6	2	6	2	6
[illegible]	2	8	2	8	10	0
[illegible]	[illegible]	18	14	12	22	4
TOTAL	[illegible]	33	18	26	34	10

Seventy-five percent of the forty-four institutions (i.e., 33 of 44) had automated mortgage loan files, but approximately 50 percent of the institutions (i.e., 26 of 44) used automated means to prepare their disclosure statements. Eight institutions with automated mortgage loan files used manual means to prepare their disclosure statements. Approximately 75 percent of the 44 institutions (i.e., 34 of 44) used manual geocoding techniques and 25 percent used automated techniques.

Nineteen of the twenty institutions that reported more than 1,000 loans on their disclosure statement employed automated mortgage loan files. These consisted of six institutions in the Buffalo SMSA, eight institutions in the San Diego SMSA, and five institutions in the Chicago SMSA. These 19 institutions accounted for 88 percent of the total number of loans and 84 percent of the total costs for all institutions studied in the three SMSAs. The cost per loan incurred by these institutions using automated techniques in the Buffalo, San Diego, and Chicago SMSAs was 2.16 $0.97, and $1.31, respectively. The average cost per loan for the 19 institutions was $1.36.

It is evident from these data that these institutions dominate the estimates of the average cost per loan in the three SMSAs It is also clear that the ability of depository institutions with large quantities of mortgage loans to capitalize on their pre-existing automated loan files developed for other operational purposes permits disclosure statements to be prepared at a fraction of the cost per loan that would otherwise be required. Thus, the overall average cost per loan of $1.42 is largely determined by the institutions that were able to use pre-existing automated means to process the large numbers of mortgage loans.

Thirteen institutions in the study reported between 200 and 1,000 loans on their disclosure statements. These consisted of eleven institutions in the Chicago SMSA and one in each of the San Diego and Buffalo SMSAs. Eight of these institutions, all in Chicago, employed an automated mortgage loan file. The average cost per loan for these eight institutions was $2.11. The other five institutions employed manual mortgage loan files, and these institutions incurred a cost per loan of $1.09. The average cost per loan for all 13 institutions was $1.68. These findings suggest that, for institutions with medium quantities of loans (i.e., 200 - 1,000 loans), automation tends to increase the cost per loan and the cost per loan is higher than for institutions with larger quantities of loans.

Eleven institutions in the study reported fewer than 200 loans in their disclosure statement. These consisted of nine institutions in the Chicago SMSA, and one in each of the San Diego and Buffalo SMSAs. Six of these institutions, all in Chicago, employed automated mortgage loan files. The average cost per loan for these six institutions was $4.56. The other five institutions employed manual mortgage loan files and these institutions incurred a cost per loan of $2.84. The average cost per loan for all 11 institutions was $3.67. The findings suggest that for institutions with small quantities of loans (i.e., less than 200 loans), automation tends to increase the cost per loan and that overall the cost per loan is higher than for institutions with large quantities of loans.

The National Burden: A rough approximation of the total industry-wide burden imposed by HMDA can be derived by multiplying the number of residential mortgage and home improvement loans originated by depository institutions subject to the Act by the cost per loan. Data were not available on the total number of such loans originated in 1977 by subject institutions so an estimate was derived from related 1977 data. The analysis upon which the estimate was based is discussed in Appendix A. The analysis indicates that an estimated 4.08 million residential mortgage and home improvement loans were originated in 1977 by the 8,700 depostiory institutions subject to the Act.

Given an average cost of $1.42 per loan, the industry-wide burden incurred by depository institutions subject to HMDA in the preparation of their 1977 disclosure statements is estimated to be approximately $5.8 million. This estimate of course, assumes that the average cost per loan found in the three SMSAs is representative of the industry-wide cost per loan.

The Regulatory Burden: Estimates of the resources required for examination of the accuracy with which disclosure statements were prepared are discussed in a companion report entitled "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements.[10] Given the levels of accuracy that were found in the disclosure statements of the 44 study institutions it is essential that a compliance examination of a depository institution include determination of the accuracy with which the disclosure statement was prepared. There are two parts to this determination. The first is a determination of the extent to which property addresses were correctly geocoded to the appropriate census tract. The second is a determination of the extent to which loan data were correctly aggregated into the disclosure statement.

Manual geocoding by examiners can be performed at a rate of 2 - 5 minutes per loan where both complete property addresses information and address coding guides are available. Thus, to regeocode a statistical sample of 100 loans would require 200 to 500 minutes (i.e., 3.3 to 8.3 hours). A spot check could be performed on a small sample of loans in one hour or less, but the resultant estimate of the accuracy level would be accompanied by a low statistical confidence level.

An estimate of the amount of compliance examination time required to determine, on statistical basis, the accuracy with which geocoding was performed by depository institutions is shown in Table 2.9. For purposes of the estimate, it is assumed that 5,000 institutions are to be examined. It is further assumed that 4,000 of these institutions have an expected geocoding accuracy level of approximately 90 percent and that 1,000 of these institutions have an expected geocoding accuracy level of approximately 80 percent. It is assumed that the number of institutions that would include the various numbers of loans in their disclosure tatements would be distributed as shown in the table. Finally, the average time required for an examiner to geocode a loan is assumed to be 3 minutes. Given these assumptions, a total of 1,213,500 minutes or 20,225 hours are required to geocode approximately 400,000 loans. This translates to approximately ten person years of effort. Additional effort is required to prepare the necessary examination procedures for the assessment of geocoding accuracy and to conduct training sessions for examiners.

The examination time required to spot check the accuracy with which a disclosure statement was aggregated is estimated to be between two to six hours per institution. This estimate assumes a loan listing would be available to examiners and that examiners would reaggregate three to five census tract lines from the disclosure statement. The actual amount of time required to examine an institution would vary substantially depending upon the availability and form of the required data, the number of loans in the selected census tracts, and the experience of the examiner. Assuming an average of four hours per each of ,000 insitutions, a total of 20,000 hours would be required. This effort translates into approximately ten person years of effort not including time spent in the preparation of examination procedures and examiner training.

TABLE 2.9 EXAMINATION TIME REQUIRED TO ASSESS THE ACCURACY OF GEOCODING

NUMBER OF LOANS IN DISCLOSURE STATEMENT	INSTITUTIONS WITH EXPECTED ACCURACY OF 90 PERCENT				INSTITUTIONS WITH EXPECTED ACCURACY OF 80 PERCENT			
	Number of Institutions	Sample Size	Examination Time Per Institution (Min)*	Total Examination Time (Min)	Number of Institutions	Sample Size	Examination Time Per Institution (Min)*	Total Examination Time (Min)
Less Than 50	500	20	60	30,000	200	20	60	12,000
50-100	200	40	120	24,000	75	50	150	11,250
100-200	300	60	180	54,000	125	80	240	30,000
200-500	500	75	225	112,500	150	110	330	49,500
500-1000	1000	85	255	255,000	200	140	420	84,000
More Than 1000	1500	95	285	427,500	250	165	495	123,750
TOTAL	4000	--	--	903,000	1000	--	--	310,500

*Assumes an average of 3 minutes to geocode a loan

The primary study conclusion regarding the regulatory burden is that a continuation of the Home Mortgage Disclosure Act must be accompanied by an assessment of the accuracy of the data, and that this assessment will require a substantial investment of resources by the regulatory agencies.

Standard disclosure statement formats and contents are the only means by which public citizens, officials, or public interest groups can readily compile and meaningfully interpret the disclosure information for the depository institutions in an SMSA. Consequently, the first suggestion is that Regulation C be revised to require the preparation of a disclosure statement in the standard format and with the loan classification and criteria specified in Regulation C.

The second suggestion is that in granting exemptions to states, the standard formats and contents specified in Regulation C be required. This would eliminate the existing problem in which the dissimilarities between state and Federal disclosure statements make compilation onerous and interpretation impossible.

2.2.7 Conclusions on Actual Usefulness

The study findings indicate that home mortgage disclosure data are useful to consumer and public interest groups but that the extent of usage by consumer and public interest groups is not clearly defined. Nevertheless, these groups strongly maintain that the data are essential.

The study findings also show that data are not particularly useful to the individual citizens, or the depository institution, and little use of the data is being made by these groups. Finally, the study indings indicate that the data are highly useful to the regulatory agencies. These agencies make extensive use of the data in fulfilling their statutory responsibilities.

The study findings on the accuracy of the mortgage disclosure data indicate that a significant percentage of the disclosure statements are too inaccurate to be used for their intended purpose. These disclosure statements can be made to be both accurate and useful through implementation of several steps:

- Revisions to Regulation C to clarify ambiguities in the criteria under which various types of loans and loan amounts are to be included in the disclosure data.

- Revisions to Regulation C to require depository institutions to maintain a loan listing showing data on the loans included in the disclosure statement.

- Revisions to Regulation C require reports to be prepared in a standard format and state exemptions based on strict conformance to this format.

- Implementation of examination procedures to assess the accuracy of geocoding and aggregation of disclosure data and to suggest improved methods for geocoding or aggregation for institutions with poor methods and accuracy levels.

The two major conclusions regarding the actual usefulness of the data are:

- Given the mandate assigned to the depository institutions and the regulatory agencies by ECOA, Title VIII, and CRA, home mortgage disclosure data, or a substitute are not only useful but are essential to enable an assessment to be made of the degree to which the mandate is being successfully carried out.

- Substantial improvements in the level of accuracy of the home mortgage disclosure data are necessary before the usefulness of these data can be realized.

The costs associated with the preparation and improvement of these data are discussed in the next section.

2.3 COST OF THE HOME MORTGAGE DISCLOSURE ACT

The cost of the Home Mortgage Disclosure Act is discussed in terms of the burden imposed on industry in the preparation of the disclosure statements and in terms of the burden that would be imposed upon the regulatory agencies were the accuracy of the disclosure statements assessed during compliance examinations.

2.3.1 The Cost Incurred by Depository Institutions

Data on the costs incurred by depository institutions in the preparation of mortgage disclosure statements were obtained in Phase II, Accuracy, of this study. Forty-four institutions in the three SMSAs of the study -- Chicago, Buffalo, San Diago -- responded to a questionnaire requesting information on the costs associated with the preparation of their fiscal year 1977 disclosure statement. Later, as part of the accuracy audits, visits were conducted on-site at each institution. During these visits, the estimated costs provided the questionnaire were discussed with institution personnel in detail. The findings are presented in full in companion report entitled "Cost of Compiling Home Mortgage Disclosure Statements."[4]

A summary of the findings of the cost analysis in terms of the cost per loan and cost per institution are shown in Table 2.7. As indicated in these data, 80 percent of the sampled institutions incurred costs per loan of $3.01 or less and 82 percent of the institutions incurred costs per loan between $.40 and $4.53. The median cost per loan incurred by the 44 institutions was $1.63 and the average cost per loan was $1.42.

Relationship Between Methods and Costs: Various methods and procedures used by depository institutions to prepare their disclosure statements were analyzed to determine whether certain methods yield lower costs per loan. The analysis included a comparison of automated and manual techniques for geocoding, maintenance of mortgage files, processing to prepare disclosure data, and disclosure statement preparation.

TABLE 2.7: RANKING OF ALL SAMPLED INSTITUTIONS BY COST PER LOAN

INSTITUTION CODE	MSB (M)/ S&L(S) C'ML BANK(C)	STATE(S) FEDERAL (F)	TOTAL COST($)	NUMBER OF LOANS	METHOD USED: MORTGAGE LOAN FILE	METHOD USED: PREPARATION OF DISCLOSURE STATEMENT	METHOD USED: GEOCODING	PERCENTAGE OF GEOCODING ACCURACY	COST/LOAN($)	RANK
CHICAGO - 25	C	S	36	171	M	M	M-4	98	.21	1
CHICAGO - 15	C	S	77	357	A-E	M	M-2	42.3	.22	2
SAN DIEGO - 2	S	F	1,093	2,891	A-E	A-E	M-1	98	.38	3
SAN DIEGO - 7	S	F	763	1,980	A-I	A-I	M-3	87	.39	4
SAN DIEGO - 4	S	S	800	2,006	A-I	A-E	M-3	94	.40	5
CHICAGO - 11	S	F	564	1,195	M	M	M-1	99	.48	6
CHICAGO - 9	S	F	303	490	A-E	M	M-2	59	.62	7
CHICAGO - 7	S	S	233	380	A-E	M	M-2	78	.62	8
CHICAGO - 17	S	S	130	201	M	M	M-6	100	.65	9
BUFFALO - 4	S	F	853	1,200	A-E	A-E	A-1	56	.71	10
CHICAGO - 4	S	F	4,739	6,603	A-I	A-I	A-2	100	.72	11
CHICAGO - 10	S	F	236	317	A-E	A-E	A-2	98	.75	12
SAN DIEGO - 3	S	S	1,083	1,419	A-I	A-E	M-3	96	.76	13
BUFFALO - 8	S	F	744	966	M	M	M-5	84	.77	14
SAN DIEGO - 5	S	F	7,010	8,384	A-I	A-I	M-3	83	.84	15
CHICAGO - 16	C	S	250	283	A	A-E	M-	92	.89	16
SAN DIEGO - 1	S	F	4,778	4,367	A-I	A-I	M-6	91	1.10	17
SAN DIEGO - 6	S	S	935	804	M	A-E	M-3	90	1.16	18
CHICAGO - 20	C	S	458	342	M	M	M-7	90	1.34	19
CHICAGO - 12	S	F	6,210	4,623	A-I	A-I	M-6	92	1.35	20
CHICAGO - 2	S	F	1,749	1,243	A-E	M	M-6	96	1.41	21
CHICAGO - 18	S	F	743	463	M	M	M-2	86	1.61	22
CHICAGO - 3	C	F	122	75	A-E	M	M-2	62	1.63	23
SAN DIEGO - 9	S	S	5,728	3,430	A-I	A-I	M-3	98	1.67	24
CHICAGO - 22	C	S	143	82	M	M	M-6	91	1.75	25
BUFFALO - 2	M	S	6,991	3,883	A-I	A-I	A-1	97	1.80	26
BUFFALO - 3	M	S	6,333	3,457	A-E	A-E	A-1	92	1.83	27
CHICAGO - 23	S	F	7,860	4,107	A-I	A-I	A-2	90	1.91	28
BUFFALO - 7	M	S	2,029	1,063	A-E	A-E	A-1	98	1.93	29
CHICAGO - 8	S	S	333	166	A	A	M-5	59	2.01	30
SAN DIEGO - 8	S	S	3,116	1,520	A-I	A-I	M-3	85	2.05	31
CHICAGO - 26	S	F	2,641	1,170	A-E	A-E	M-6	94	2.26	32
CHICAGO - 13	C	F	710	298	A-E	M	M-6	98	2.38	33
BUFFALO - 6	M	S	7,273	2,901	A-E	A-E	A-1	90	2.51	34
BUFFALO - 5	C	S	8,282	2,792	A-I	A-E	A-1	100	2.97	35
CHICAGO - 5	S	F	2,497	817	A-I	A-I	M-9	93	3.06	36
CHICAGO - 1	S	F	1,850	595	A-E	A-E	M-8	85	3.11	37
CHICAGO - 19	C	S	1,913	610	A-I	A-I	M-8	72	3.14	38
BUFFALO - 1	C	F	623	160	M	M	M-10	97	3.89	39
CHICAGO - 6	C	S	450	109	M	M	M-1	68	4.13	40
CHICAGO - 21	C	S	385	89	A-E	M	M-2	61	4.33	41
CHICAGO - 24	C	F	388	85	A	M	M-7	99.5	4.56	42
SAN DIEGO - 10	S	F	366	47	M	M	M-2	98	7.79	43
CHICAGO - 14	C	S	1,098	80	A-E	M	M-7	55	13.73	44

METHOD USED CODES:

Mortgage Loan File:
Preparation of Disclosure Statement:

A-I Automated Using Internal Sources
A-E Automated Using External Sources

M/Mutual Savings Bank

GEOCODING:
A-1 Automated Using External Service Bureau
A-2 Automated and Manual for Non-Matches
M-1 Manual Using Sima ACG
M-2 Manual Using CTM
M-3 Manual Using TBM
M-4 Manual Using D&B
M-5 Manual by Appraiser
M-6 Manual Using Sima ACG & CTM
M-7 Manual Using CTM & D&B
M-8 Manual Using CTM & Street Map
M-9 Manual Using Sima ACG, CTM, and D&B
M-10 Manual By Loan Officer

Depository institutions were found to use a variety of methods and procedures to prepare their disclosure statements. In fact, the study found no two institutions with identical procedures for geocoding, file maintenance, and aggregating data into the disclosure statements.

The number of institutions using manual and automated methods for each of the three primary aspects involved in the preparation of disclosure statements is shown in Table 2.8.

TABLE 2.8: METHODS FOR PREPARING DISCLOSURE STATEMENTS

	NUMBER OF INSTITUTIONS					
SMSA	Mortgage Loan Files		Preparation of Disclosure Statement		Geocoding Method	
	Manual	Automated	Manual	Automated	Manual	Automated
BUFFALO	2	6	2	6	2	6
SAN DIEGO	2	8	1	8	10	0
CHICAGO	7	19	16	10	22	4
TOTAL	11	33	19	24	34	10

Seventy-five percent of the forty-four institutions (i.e., 33 of 44) had automated mortgage loan files, but approximately 50 percent of the institutions (i.e., 24 of 44) used automated means to prepare their disclosure statements. Eight institutions with automated mortgage loan files used manual means to prepare their disclosure statements. Approximately 75 percent of the 44 institutions (i.e., 34 of 44) used manual geocoding techniques and 25 percent used automated techniques.

Nineteen of the twenty institutions that reported more than 1,000 loans on their disclosure statement employed automated mortgage loan files. These consisted of six institutions in the Buffalo SMSA, eight institutions in the San Diego SMSA, and five institutions in the Chicago SMSA. These 19 institutions accounted for 88 percent of the total number of loans and 84 percent of the total costs for all institutions studied in the three SMSAs. The cost per loan incurred by these institutions using automated techniques in the Buffalo, San Diego, and Chicago SMSAs was $2.16, $0.97, and $1.31, respectively. The average cost per loan for the 19 institutions was $1.36.

It is evident from these data that these institutions dominate the estimates of the average cost per loan in the three SMSAs. It is also clear that the ability of depository institutions with large quantities of mortgage loans to capitalize on their pre-existing automated loan files developed for other operational purposes permits disclosure statements to be prepared at a fraction of the cost per loan that would otherwise be required. Thus, the overall average cost per loan of $1.42 is largely determined by the 19 institutions that were able to use pre-existing automated means to process the large numbers of mortgage loans.

Thirteen institutions in the study reported between 200 and 1,000 loans on their disclosure statements. These consisted of eleven institutions in the Chicago SMSA and one in each of the San Diego and Buffalo SMSAs. Eight of these institutions, all in Chicago, employed an automated mortgage loan file. The average cost per loan for these eight institutions was $2.11. The other five institutions employed manual mortgage loan files and these institutions incurred a cost per loan of $1.09. The average cost per loan for all 13 institutions was $1.68. These findings suggest that, for institutions with medium quantities of loans (i.e., 200 - 1,000 loans), automation tends to increase the cost per loan and the cost per loan is higher than for institutions with larger quantities of loans.

Eleven institutions in the study reported fewer than 200 loans in their disclosure statement. These consisted of nine institutions in the Chicago SMSA, and one in each of the San Diego and Buffalo SMSAs. Six of these institutions, all in Chicago, employed automated mortgage loan files. The average cost per loan for these six institutions was $4.56. The other five institutions employed manual mortgage loan files, and these institutions incurred a cost per loan of $2.84. The average cost per loan for all 11 institutions was $3.67 The findings suggest that, for institutions with small quantities of loans (i.e., less than 200 loans) automation tends to increase the cost per loan and that overall the cost per loan is higher than for institutions with large quantities of loans.

The National Burden: A rough approximation of the total industry-wide burden imposed by HMDA can be derived by multiplying the number of residential mortgage and home improvement loans originated by depository institutions subject to the Act by the cost per loan. Data were not available on the total number of such loans originated in 1977 by subject institutions, so an estimate was derived from related 1977 data. The analysis upon which the estimate was based is discussed in Appendix A. The analysis indicates that an estimated 4.08 million residential mortgage and home improvement loans were originated in 1977 by the 8,700 depostiory institutions subject to the Act.

Given an average cost of $1.42 per loan, the industry-wide burden incurred by depository institutions subject to HMDA in the preparation of their 1977 disclosure statements is estimated to be approximately $5.8 million. This estimate, of course, assumes that the average cost per loan found in the three SMSAs is representative of the industry-wide cost per loan.

The Regulatory Burden: Estimates of the resources required for examination of the accuracy with which disclosure statements were prepared are discussed in a companion report entitled "Procedures to Assess the Accuracy of Home Mortgage Disclosure Statements.[10] Given the levels of accuracy that were found in the disclosure statements of the 44 study institutions it is essential that a compliance examination of a depository institution include determination of the accuracy with which the disclosure statement was prepared. There are two parts to this determination. The first is a determination of the extent to which property addresses were correctly geocoded to the appropriate census tract. The second is a determination of the extent to which loan data were correctly aggregated into the disclosure statement.

Manual geocoding by examiners can be performed at a rate of 2 - 5 minutes per loan where both complete property addresses information and address coding guides are available. Thus, to regeocode a statistical sample of 100 loans would require 200 to 500 minutes (i.e., 3.3 to 8.3 hours). A spot check could be performed on a small sample of loans in one hour or less, but the resultant estimate of the accuracy level would be accompanied by a low statistical confidence level.

An estimate of the amount of compliance examination time required to determine, on a statistical basis, the accuracy with which geocoding was performed by depository institutions is shown in Table 2.9. For purposes of the estimate, it is assumed that ,000 institutions are to be examined. It is further assumed that 4,000 of these institutions have an expected geocoding accuracy level of approximately 90 percent and that ,000 of these institutions have an expected geocoding accuracy level of approximately 80 percent. It is assumed that the number of institutions that would include the various numbers of loans in their disclosure statements would be distributed as shown in the table. Finally the average time required for an examiner to geocode a loan is assumed to be 3 minutes. Given these assumptions, a total of 1,213,500 minutes or 20,225 hours are required to geocode approximately 400,000 loans. This ranslates to approximately ten person years of effort. Additional effort is required to prepare the necessary examination procedures for the assessment of geocoding accuracy and to conduct training sessions for examinere.

The examination time required to spot check the accuracy with which a disclosure statement was aggregated is estimated to be between two to six hours per institution. This estimate assumes a loan listing would be available to examiners and that examiners would reaggregate three to five census tract lines from the disclosure statement. The actual amount of time required to examine an institution would vary substantially depending upon the availability and form of the required data, the number of loans in the selected census tracts, and the experience of the examiner. Assuming an average of four hours per each of 5,000 insitutions, a total of 20,000 hours would be required. This effort translates into approximately ten person years of effort not including time spent in the preparation of examination procedures and examiner training.

TABLE 2.9 EXAMINATION TIME REQUIRED TO ASSESS THE ACCURACY OF GEOCODING

NUMBER OF LOANS IN DISCLOSURE STATEMENT	INSTITUTIONS WITH EXPECTED ACCURACY OF 90 PERCENT				INSTITUTIONS WITH EXPECTED ACCURACY OF 80 PERCENT			
	Number of Institutions	Sample Size	Examination Time Per Institution (Min)*	Total Examination Time (Min)	Number of Institutions	Sample Size	Examination Time Per Institution (Min)*	Total Examination Time (Min)
Less Than 50	500	20	60	30,000	200	20	60	12,000
50-100	200	40	120	24,000	75	50	150	11,250
100-200	300	60	180	54,000	125	80	240	30,000
200-500	500	75	225	112,500	150	110	330	49,500
500-1000	1000	85	255	255,000	200	140	420	84,000
More Than 1000	1500	95	285	427,500	250	165	495	123,750

The primary study conclusion regarding the regulatory burden is that a continuation of the Home Mortgage Disclosure Act must be accompanied by an assessment of the accuracy of the data, and that this assessment will require a substantial investment of resources by the regulatory agencies.

CHAPTER 3

OBSERVATIONS ON THE UTILITY OF ALTERNATIVE FORMS OF THE HOME MORTGAGE DISCLOSURE ACT

In this chapter, several alternatives to the current form of the Home Mortgage Disclosure Act are defined, and observations are presented on their potential benefits and costs. Two types of changes in the Act are considered. These are:

- Changes in the content of data reported under the Act
- Changes in the scope of institutions required to report under the Act.

It should be noted that the discussion in this chapter presents observations rather than the results of a more methodologically rigorous analysis. These observations are based on the insights accumulated by the study team during the two years of the present study. They are limited in nature and deal only with selected aspects of the various alternatives.

3.1 CHANGES IN THE CONTENT OF REPORTING

One set of alternatives to the current form of the Home Mortgage Disclosure Act involves changes in the content of data required to be reported. In this section, four such potential changes are considered. These are:

- Addition of data on factors reflecting the demand for mortgage loans
- Addition of data on the geographical pattern of deposits
- Addition of data on aggregate portfolio or debt held
- Addition of data on other types of loans currently not disclosed.

Each of these will be discussed briefly in terms of their benefits and cost implications.

3.1.1 Addition of Demand Data

There is currently not sufficient agreement on a practical definition of "demand" for a decision on the utility of disclosing these data to be reached. Resolution of litigation brought by National Urban League et.al. against the Comptroller of the Currency requires the regulatory agencies to undertake a pilot study testing the value of obtaining data on applications for mortgage loans. The need for such a study is testimony to the lack of adequate information on the utility of demand data. Furthermore, a study of applications will not fully resolve the demand question because data on applications alone do not account for all "demand" data. These data do not adequately account for inquiries or the potentially powerful effects of prescreening. Prescreening is the creation of conditions or an environment by which prospective borrowers who want loans never request or inquire about them because they are discouraged or turned away prior to the application stage. For a meaningful assessment of demand, applications data must be assessed in terms of both an institution's efforts to make prospective borrowers aware of their legitimate opportunities for loans and of the institution's treatment of prospective borrowers prior to a financial application.

The fact that application data do not reveal all forms of discrimination does not necessarily mean that disclosure of such information is without value. Consequently, the investigations currently underway to determine the value of applications data are an important step in achieving an overall understanding of the utility of disclosing demand data. The obervations which follow are restricted to the potential benefits, problems, and costs involved in disclosing applications data.

Considerable insight into the limitations of applications data can be gained from consideration of the the definition of redlining and discrimination. For purposes of this report, unlawful redlining or discrimination occurs when decisions on mortgage loan financing have the purpose or the effect of giving differential treatment to a borrower or a prospective borrower on the basis of race, color, religion, sex, or other characteristics prohibited by statutes such as Title VIII or ECOA. This definition indicates that data are needed on both borrowers and prospective borrowers; however, all prospective borrowers do not necessarily submit applications. To address the full scope of unlawful redlining or discrimination, applications data would have to provide a basis for 1) identifying the various forms of differential treatment and 2) determining whether such treatment was correlated (either by purpose or effect) with one or more of the prohibited bases.

The first observation to be made about disclosing applications data concerns the inherent limitations of the conlusions that can be drawn regarding discriminatory practices. These limitations apply even if accurate and complete data on both loan applications and loan originations are available. A comparison of these data revealing no evidence of discrimination does not preclude the possibility of discriminatory prescreening practices. Furthermore, these data do not provide information sufficient to detect the possibility of prescreening; and, consequently, they are not sufficient to remove the lending patterns of an institution from such consideration. To be sure, these data can be used to detect actual discriminatory practices in the demand of loans or in the granting of loan terms. Still, the degree to which this is possible is dependent upon the type of data disclosed on each application. In summary, applications data, at best provide the basis for a one-sided test that could indicate the existence of discriminatory practices. Applications data do not, however provide an adequate basis for detecting other possible forms of discrimination (e.g., prescreening practices).

The second observation concerning applications data regards its quality. It is not at all certain that the quality of the data currently maintained in loan application registers is sufficient to be useful for disclosure purposes. First, the degree to which these registers are maintained on current basis varies considerably among institutions. Secondly, a complete set of data are not necessarily recorded for each application. Once an institution has sufficient information upon which to base a decision, the institution needs to obtain no further information for its purposes from the applicant. Thus, when the applicant has previously established a credit record, incomplete information may be recorded.

The third observation concerns the various options in the level of detail with which application data could be disclosed. Should data on all applications be disclosed or only data on denied or withdrawn applications? Should the disclosed applications data show only the types and amounts of loan applications in each census ract or should these data include detailed characteristics of borrowers property, and loan terms? These options entail substantial differences in the degree to which the resulting data are useful in assessing discriminatory practices, as well as in the costs associated with their disclosure. If only the types and amount of loan applications in each census tract are to be disclosed, cost considerations discussed later mitigate against disclosing data on all applications. In such a case, disclosure of data on only denials or withdrawals would provide the same amount of information at drastically reduced costs, because depository institutions could continue to provide originations data using current less costly methods. If detailed data on the characteristics of borrower, property, and loan terms were to be disclosed, however, then a strong argument obtains for disclosing these data on all applications to provide a basis for comparison. The costs associated with this approach, however, appears to be considerably higher than the current costs associated with preparation of the report under Regulation C.

Cost Implications: The cost of disclosing data related to all the applications for mortgage loans would be considerably higher than the cost of disclosing data related to all mortgage loan originations. The higher cost of disclosing data on applications derives from the lack of automated sources for these data. Most depository institutions that originate a significant quantity of mortgage loans annually (e.g. more than 1,000 loans) use automated means to prepare their disclosure statement. These institutions maintain an automated loan file and use this file as the source of data for the disclosure statement. It seems likely that at least three out of every four loans on disclosure statements are based upon data from such an automated file. Without such automated means and sources of data, depository institutions that currently aggregate data in preparing their disclosure statements on hundreds or thousands of loans would incur far greater costs than the costs they currently incur in the preparation of their disclosure statements. Most of these institutions, however, maintain their loan applications data in manual form, for few have automated their loan application register. This lack of automation is explained in large part by the fact that a file of loan applications does not have the same degree of operational use that the file of loan originations does.

The file of loan originations has a major operational use in tracking the status of mortgage loans, in producing an investment profile, as well as in generating a disclosure statement. It is the ability of depository institutions with large quantities of loans to capitalize on their automated loan files that already exist for these other operational purposes that has enabled these institutions to prepare disclosure statements at a fraction of the cost than would otherwise be required.

The disclosure of data on loan applications would require institutions receiving a significant quantity of applications to automate their loan application file. The considerable costs associated with this undertaking would represent an investment in automating a set of data of little use other than for compliance purposes.

The annual cost of converting this large volume of data to machine readable form would be a function of the number of applications, the number of data elements and resulting characters, the rate of data entry and the hourly cost of data entry. The costs associated with these components are calculated under the following assumptions:

Number of applications: 4,000,000
Number of characters per application: 100 - 200
Rate of data entry & verification: 4,000 characters per hour
Hourly rate for data entry: $10 per hour

The costs based upon 100 characters per application and 200 characters per application (i.e., 200 characters) are as follows:

Cost (100 characters) = (4,000,000) (100) (10)/4,000 = $4 million
Cost (200 characters) = (4,000,000) (200) (10)/4,000 = $8 million

Estimates of the data entry costs are obviously very sensitive to the values assumed for each of the four parameters. The number of data elements and associated data characters to be disclosed is one important parameter. A disclosure requirement with relatively few data elements and of low cost relative to other requirements would be the disclosure of the number and amounts of applications for loans in each census tract. A more complex and costly disclosure requirement would be the disclosure of detailed data on applicant, property, and loan characteristics derived, for example, from the current or a modified loan application register. Such data could include, for example, such item as the applicant's sex, race age, income, the appraised value and age of the property, and the terms of the loan.

The cost of disclosing applications data could be reduced substantially, if only data on denials or withdrawals were disclosed. This approach would be preferable, only if the desired set of data were restricted to the types and amounts of applications in each census tract. Since the number of denials and withdrawals together constitute only a small percentage of the overall number of applications the costs associated with automating these data would be substantially less than the costs associated with automating all applications. The data entry costs, for example, would be reduced from $4 million to $400,000 assuming there were 100 characters per each application and that 10 percent of the applications were either withdrawn or denied.

A second major cost consideration is the resources needed to develop computer programs for use by depository institutions in processing applications data. The number of institutions requiring such programs would vary depending upon the number of applications and the amount of data for each application that were to be processed. This would, in turn, depend upon whether all applications or only denials and withdrawals were to be disclosed and upon the level of detail for each application. Institutions with, say, more than 1,000 applications to be disclosed would most likely benefit from automation. If a significant number of institutions were required to develop computer programs, then the development of a common computer program should be considered.

Providing a standard computer program in a common language (e.g., COBOL), could result in a significant cumulative saving for those institutions possessing the requisite capabilities by avoiding redundant development costs.

Summary Observations on Disclosure of Application Data: There is insufficient information on the usefulness and the cost of disclosing various forms of applications data to permit an informed assessment of the consequences of disclosure. The absence of automated sources for these data would make the disclosure data from all mortgage applications a costly undertaking. Data on denied or withdrawn applications can be disclosed at a small fraction of the cost of disclosing data on all applications; however, this approach is tied to disclosure of data on originations. Consequently, the usefulness of these data would be restricted to an assessment of patterns of geographic discrimination and would not be useful in assessing the broader range of potential discriminatory practices. Furthermore, the issue of the discriminatory denial of applications on a geographic basis is undoubtedly but one small part of any discriminatory practices that might exist. Unfortunately, the apparent utility of disclosing applications data can be summarized with the observation that the data obtainable at reasonable cost are not very useful and the data that are potentially useful are extremely costly to obtain.

3.1.2 Addition of Geographically Arrayed Deposit Data

There has been interest by some consumer groups in the disclosure of geographically arrayed deposit data. As is the case with demand data, there is currently insufficient information or agreement on the benefits and costs of disclosing deposit data to make an informed judgment on the utility of disclosing this information. The interest of those who seek disclosure of deposit data derives from their desire to compare on a geographic basis — deposit received by an institution to determine if depository institutions are reinvesting the deposits (i.e., making loans) in the same geographical areas from where the deposits were obtained. Not doing so is commonly referred to as "disinvestment."

Thus, a decision to require disclosure of data on the geographical pattern of deposits would necessarily be based upon the assumption that depository institutions are somehow required to reinvest deposits in the areas from which they originated. Undeniably, depository institutions have an obligation to help meet the credit needs of the communities in which they are chartered; however, it does not appear that a comparison of deposits and loans would provide a meaningful index against which to judge the degree to which the credit needs are being met.

What is the significance, for example, of data which show a commercial bank with 1,000 depositors and 30 mortgage loans in a given geographic area in contrast to a savings and loan association with 1,000 depositors and 400 mortgage loans in the same geographic area? This would suggest the existence of a meaningful credit allocation algorithm that can be created to somehow judge the appropriateness of the volume of loans relative to the volume of deposits for a geographic area. Even in the unlikely event that a valid argument for such an algorithm could be constructed for theoretical situation, the vagaries of most actual situations would preclude its valid use. First, the credit needs of depositors vary widely, and there is no practical method to gauge their credit needs on the basis of deposits. Secondly, the credit needs of depositors can be met by a variety of organizations and the depositors, themselves, ultimately decide, which, among the available alternatives they shall choose. Thirdly, the addresses provided to depository institutions by depositors often do not reflect their actual resident location so that arraying deposits geographically on the basis of these addresses provides a misleading indicator of even the geographic location of their credit needs. Fourthly any comparison of deposits and loans would presumably be performed on the basis of debt held for a variety of loans and not the basis of annual mortgage loan originations. Since the amount of loan debt held is not currently disclosed for any type of loans an additional disclosure requirement for debt held would be necessary. Finally, the disclosure of deposit data would be a costly undertaking.

Cost Implications: Although the costs that would be incurred by depository institutions in disclosing geographically arrayed deposit data were not estimated in this study, a cursory examination indicates that depository institutions would incur significant one-time developmental costs as well as additional ongoing operational costs equal or greater than those currently incurred under Regulation C disclosure. One-time developmental costs would be incurred in the preparation and implementation of geocoding methods and procedures for aggregating deposit data in the required format. Institutions with more than ,000 depositors would most likely need automated techniques to process and aggregate the deposit data. The impact would be substantiel on those institutions that typically originate only a few mortgage loans but that have large numbers of depositors. Many commercial banks would fall in this category. Most institutions that originate few mortgage loans use manual techniques to prepare the current disclosure statement. To disclose data on large numbers of depositors, these institutions would need to revise their approach to geocoding and to institute automated techniques to process the larger volume of data.

The operational costs incurred by an institution in preparing a disclosure statement on deposits would be a function of the number of depositors, the amount of information to be disclosed, and the institution's ability to capitalize on existing automated sources for these data. The costs incurred on a per loan basis in preparing the current disclosure statement could serve as rough indicator of the costs incurred on a per depositor basis if both the amount of information to be disclosed and the existence of information in automated form are equivalent. If deposit information needed for disclosure were not already available and accessible in automated form; however, substantially higher costs would accrue to place the data into automated form.

3.1.3 Addition of Data on Aggregate Portfolio

A disclosure statement currently provides information on the mortgage loan originations or purchases by an institution within a single fiscal year. Consequently, a depository institution's most recent disclosure statement shows the volume of lending in each census tract during its last fiscal year, but it does not reflect the lending in previous years or the aggregate volume of mortgage loans currently held in each census tract. The pattern of lending in previous years can be determined from the previous disclosure statements, but no mechanism exists to show the total volume of mortgage loans currently held by the depository institutions. The volume of loans currently held by an institution might indicate a significant contribution to the credit needs of a community, despite the fact that the institution made no loans in the area in a given year. Conversely, a depository institution could have sold many of its loans in a given geographic area, but neither would this situation be reflected on the disclosure statements of the institution.

Thus, disclosure information on the aggregate mortgage portfolio or debt held would provide the public and the regulatory agencies with a more accurate assessment of an institution's overall commitment to lending in a given area.

Cost Implications: Three factors would greatly influence the cost impact that disclosure of the aggregate portfolio would have on an institution:

- Option of including only loans originated since the Home Mortgage Disclosure Act
- Existence of an automated loan file containing census tract information
- Efficiency of manual aggregation procedures.

Many depository institutions have not geocoded the mortgage loans they originated prior to the Home Mortgage Disclosure Act. If institutions were given the option of including only mortgage loans originated since they became subject to the Act, these institutions would be spared the costly effort required to geocode these loans.

The second factor that would greatly influence the cost to a given institution is whether the institution maintains an automated loan file that includes the census tract designation for the property associated with the loan. Institutions that maintain such an automated file may be able to easily sort the file to produce the aggregate portfolio disclosure statement at a small incremental increase in cost. Some institutions with automated mortgage loan files do not maintain the census tract on this file. Instead, they sort the file to produce a tape of the loan originations for a given fiscal year which they, in turn, send to a service bureau to geocode. These institutions would incur greater incremental costs.

The efficiency of the recording and aggregation procedures employed by institutions using manual means will greatly influence the costs of disclosing the aggregate portfolio. If journals or files organized on a census tract basis are continuously maintained, then preparation of the data for the aggregate portfolio should require no greater costs than does the preparation of the data for the originations for a single fiscal year. However without such procedures the cost of preparing the aggregate portfolio data could be much higher than the costs of preparing the data on originations required by Regulation C.

3.1.4 Addition of Other Types of Loans

A fourth possible change to the contents of the Act would be to include other types of loans in the disclosure statements. Such loan types currently not disclosed include: business, commercial, or consumer loans, short term construction loans, and refinances made for purposes other than to develop property in the SMSA.

Although the benefits and costs of adding these other types of loans to disclosure statements were not analyzed, a cursory examination suggests that the benefit-to-cost ratio for disclosure of these loans would be low relative to the data currently disclosed mortgage loan originations Undeniably such loans constitute contribution to a community's credit needs; however, it appears that the cost per loan disclosed would be much higher than the cost per mortgage loan originations currently disclosed. The higher cost per loan would derive from new or additional geocoding requirements and from the added effort required to process and aggregate data from various departments and files within an institution. The other types of loans considered here (e.g., business and consumer loans) are typically managed by different departments within an institution. Instituting new geocoding requirements and procedures involving several departments with a variety of manual and automated methods would, it is felt, result in a greater cost per loan than the cost per loan for current disclosure.

3.2 CHANGES IN THE SCOPE OF REPORTING REQUIREMENTS

A second way the current form of HMDA could be changed is by altering the scope of reporting requirements. Under the Act and Regulation C as currently promulgated, only institutions located in an SMSA and with assets in excess of $10 million are required to prepare disclosure statements. This requirement could be changed in two ways: by requiring non-SMSA institutions to prepare disclosure statements, and/or by altering the asset size requirement.

3.2.1 Non-SMSA Reporting

A recent report prepared by the Board of Governors of the Federal Reserve System addressed the usefulness and feasibility of nonmetropolitan disclosure.[10] This report indicates that under current requirements, 8,700 depository institutions are required to comply with the Act or with state laws that are substantially similar. These institutions held, at the end of 1977, total assets of $1.5 trillion and about 450 billion in qualifying loans. If disclosure requirements were extended to depository institutions with $10 million in assets and located outside SMSAs, 6,800 additional institutions would be covered. In 1977, this group of 6,800 institutions represented one-sixth of all depository institutions, and accounted for 12 percent of the industries total assets and 11 percent of all qualifying loans. Also affected by such an extension would be an additional 1,000 depository institutions with offices both inside and outside SMSAs. These institutions would be required to prepare additional disclosure statements to cover the non-SMSA communities in which they have offices.

The Federal Reserve Board study did not reach conclusions on whether the overall benefits of the Act outweigh its costs or whether the Act should

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3.2.2 Institution Size

Under the current form of the Home Mortgage Disclosure Act, only depository institutions with assets of over $10 million are required to prepare disclosure statements. A possible alternative to HMDA would be to change the asset size of institutions required to report.

The number of depository institutions and the volume of loans that are excluded from reporting by virture of the current asset size limitation is not substantial. The completeness analysis conducted in Phase III of the present study obtained results on the percentage of mortgage loan originations excluded by both non-SMSA and by the asset size limitation in San Diego, Erie, and Cook counties. These results, shown in Table 3.1, indicate that the percentage of loans excluded from disclosure statements by these two exceptions ranged from less than 1 percent in Erie County to slightly more than 2 percent in Erie County. This volume is not a significant omission in disclosure reporting within these SMSAs.

TABLE 3.1: PERCENTAGE OF MORTGAGE LENDING BY DEPOSITORY INSTITUTIONS

Type of Depository Institution	San Diego	Erie County	Cook County
Subject to HMDA	62.5	81.7	87.9
Not Subject to HMDA*	1.7	0.8	2.2

* Commercial Banks, Mutual Savings Banks, and Savings and Loan Associations

3.3 CONCLUSIONS ON ALTERNATIVE FORMS

In determining whether to extend the current form of the Home Mortgage Disclosure Act to any of the alternatives discussed above, consideration should be given to the usefulness, accuracy, and cost of the current form of the data. The study findings show that current data are useful to both consumer groups and the regulatory agencies; however, the extent to which consumer groups use the current data or would use the extended data is not sufficiently well defined to justify an extension with its attendant costs. Furthermore, the accuracy of the current data needs to be improved. The study conclusion is that the Home Mortgage Disclosure Act should not be extended to include alternative forms of the data until the accuracy of the current form of the data is improved and the usefulness of both the current and alternative forms of the data to the public are better defined.

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APPENDIX A

ESTIMATE OF TOTAL NUMBER OF RESIDENTIAL MORTGAGE AND HOME IMPROVEMENT LOANS ORIGINATED IN 1977

According to data compiled by the U.S. Department of Housing and Urban Development, the combined home mortgage loan originations by commercial banks, mutual savings banks, and savings and loan associations totaled $143 billion in calendar year 1977.[2] This volume includes both 1-4 family non-farm homes and multifamily residential properties and it represents 81.8 percent of the national volume of $173 billion originated by all lenders. These data do not include mortage loans originated by Federal Credit Unions which are also subject to the Act nor do they include home improvement loans that are also to be included in disclosure statements. Results from the completess study in San Diego, Cook, and Erie counties indicate that the average dollar value of a loan in those areas to be $50 726, $36 362, and $23,655 respectively. The average of these three loan amounts is approximately $37,000. Using $37,000 as the national average the number of mortgage loans originated by commercial banks, mutual savings banks, and savings and loan associations in 1977 can be estimated by dividing $143 billion by $37,000. This yields an estimate of 3.86 million mortgage loans. This figure does not include, however, home improvement loans or those made by credit unions, both of which are subject to reporting under Regulation C. A study published by the Federal Reserve Board estimated that Credit Unions accounted for approximately 1 percent of the mortgage loans held by depository institutions in 1977. Assuming that the percentage of loans held to be equivalent to the percentage originated, credit unions would increase the total number of mortgage loans originated by 1 percent. Applying this factor, the total number of mortgage loans originated by all four types of depository institution in 1977 is 3.86 million x 1.01 or 3.9 million.

Data processed in Phase 1 of the study for Buffalo, Chicago, and San Diego were analyzed in order to estimate the number of home improvement loans. These data are shown in Table A.1.

TABLE A.1: NUMBER OF MORTGAGE LOANS AND HOME IMPROVEMENT LOANS IN 1977

SMSA	Number of 1-4 Family Residential Mortgage Loans	Number of Home Improvement Loans	Percentage of Home Improvement Loan To Mortgage Loans
Buffalo	25,757	4,010	15.5
Chicago	138,270	39,006	28.2
San Diego	40,644	10,711	26.3

Home improvement loans constituted from 15.5 percent to 28.2 percent of the number of mortgage loan originations in the three SMSAs. The average of these three is 23.3 percent. Assuming this percentage reflects the national level, the combined number of mortgage loans and home improvement loans originated in 1977 can be estimated at 3.9 million x 1.233 or 4.8 million.

A study published by the Federal Reserve Board reports that 85 percent of all mortgage loans of a type qualifying for disclosure under the Act are originated by depository institutions that are subject to the Act.[10] Applying this factor results in an estimated 4.08 million residential mortgage and home improvement loans originated by the 8,700 depository subject to the Act.

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